EPA's Office of Grants and Debarment (OGD) IT Management Systems: Modernization/Enhancement and Operations & Maintenance Support Services

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Attachment No. 1
Performance Work Statement

SECTION I

1. Background:

The mission of the Environmental Protection Agency is to protect public health and the environment. To accomplish this mission, the Agency awards approximately $4 billion in assistance agreements annually (almost half of the Agency's budget). The Office of Grants and Debarment (OGD), under the supervision of the Director of OGD, is charged with administering the assistance agreements that move the Agency's mission forward, which includes grants, fellowships, and Interagency Agreements (IA). In addition, EPA's Suspension and Debarment Program (SDP), also under OGD, is responsible for developing suspension and debarment cases involving issues of waste, fraud, abuse, and poor performance of recipients receiving Federal funds.

EPA supports a wide range of direct and pass-through environmental grants including discretionary/competitive, earmarks, formula, and mandatory grants. These grants support research used as the basis for air, water, pesticides and other media, as well as the development of innovative methodologies for environmental activities such as waste cleanup, pollutant modeling, methods for quantifying benefits, and analytical test methods. Grants support our environmental partners, states, tribes and local communities, by investing in the development of environmental infrastructure, building local environmental capacity, and providing environmental program management and enforcement resources. Agency mission accomplishment in these areas is dependent on the efficient award and management of assistance agreements.

The Office of Grants and Debarment has several systems and applications to support its grants, interagency agreements, and debarment program. OGD developed the Integrated Grants Management System (IGMS Legacy) and its complementary system, the Integrated Grants Management System / Next Generation Grants System (IGMS/NGGS), to address shortcomings in the Agency's pre-award, post award, and closeout activities identified in the General Accounting Office (GAO) and Office of Inspector General (OIG) findings. This system was designed to automate the grant process from the initial negotiation of the grant work plan, through application and award to the closeout of the grant. Similarly, IGMS Legacy includes the development and management of Interagency Agreement documents. IGMS Legacy and IGMS/NGGS systems provide grantees, IA partners, and EPA staff the ability to develop, review, approve, and share documents as well as manage activities in an electronic environment. Software development and database design of a large portion of the IGMS/NGGS system has already been built within an Oracle environment and the current IGMS Legacy system utilizes Oracle database platform. However, IGMS Legacy is built in outdated Lotus Notes technology. The system scope has been massively expanded over the years to address emerging policy

issues and is experiencing capacity, technical, and other operational issues and limitations. OGD's Suspension and debarment cases are documented and tracked in OGD's Case Application for Debarment and Suspension (CADS). CADS resides in Microsoft SharePoint on premise technology, while the legacy Case Management System (CMS) resides on a Lotus Notes platform and is used only for historical cases. These systems reside in the EPA's National Computer Center (NCC), which provides large-scale computing services for the Agency nationwide. OGD has leveraged the Agency's roll out of Microsoft SharePoint Online collaboration software by utilizing this technology for its Catalog of Federal Domestic Assistance (CFDA) app and the new Comply App. Lastly, OGD supports a repository on the Agency's Documentum Enterprise Content Management System (ECMS) for electronic grant (EGRS) and IA (ERIA) records, eliminating the need for paper records.

In order to continue operations in a tightening Federal budget environment, OGD is interested in streamlining and standardizing the Agency's grants management process, while modernizing its management and support systems. One of the goals in the EPA Grants Management Plan (2016-2020) is to streamline the business procedures for assistance agreements, while maintaining the gains already achieved over the years in compliance, results, and quality. OGD's Grants Transformation Initiative seeks ways to reduce the administrative burden on staff through the transformation of these business processes. In addition, EPA also embraces OMB's IT Shared Service Strategy for identifying potential opportunities for systems consolidation to a shared service provider and OMB's Cloud Smart Proposal by utilizing EPA's procured cloud subscriptions, including but not limited to, Amazon Web Services (AWS), Cloud.gov, Microsoft Office 365, SharePoint Online, and Azure technologies. In order to achieve these objectives, as directed by OGD, software engineering expertise and support is required in a full range of activities including: providing project and configuration management, analyzing requirements and systems, designing, developing, testing, implementing, and sustaining new and existing website(s), application(s), database(s), systems interface(s), and developing system life cycle and/or application documentation. The proposed approaches chosen by the contractor and agreed to by EPA to address required and optional system engineering requirements shall be appropriate to the complexity, size, and duration of the effort and shall be conducted in accordance with the appropriate Capability Maturity Model (CMM) requirements depending on the nature of the application.

2. Purpose:

The purpose of this task order is to procure a broad range of technical services to support the Office of Grants and Debarment (OGD) with its software engineering requirements throughout all phases of the system lifecycle for its grants management systems. In addition to supporting OGD's existing grants,

interagency agreements and debarment systems, this task order also includes software engineering and consulting activities to support OGD's deployment of IGMS/NGGS to replace the IGMS Legacy system. In order to accomplish these objectives, the contractor shall provide expert technical support in project management, quality assurance, systems analysis and retirement, as well as software modernization/enhancements, testing, integration, implementation, and sustainment. After contract award, the contractor may propose a regression testing tool for use provided the software is prior approved for use in EPA network environment and by EPA management. EPA has developed an Enterprise Architecture (EA) program using the Federal Enterprise Architecture reference models to standardize and improve IT management processes across the EPA. During the transformation activities and in performance of PWS tasks, the contractor shall utilize EPA-owned project management and software application development management and communications applications and systems, unless otherwise approved in writing by the Contracting Officer's Representative (COR). In addition, the contractor shall be compliant with all Federal, state, EPA, and EPA grants management and Enterprise Architecture (EA) regulations, policies, procedures, standards, and guidance.

The Contractor shall perform the following objectives under this Task Order:

- Continue IGMS/NGGS application modernization/enhancement activities. Address existing EPA-approved software modernization/enhancement backlog (to be provided to contractor within 30 days of contract award) and business and functionality modernization/enhancement requirements that emerge from contractor assessment of the 'as is' state of the IGMS/NGGS pre-award, award, and post-award software modules:
    - Pre-Award Module-Is fully developed; only minor enhancements will be required over the contract performance period.
    - Award and Post-Award Modules-Were developed approximately three years ago and require additional testing; will require a to-be-determined scope of modernization/enhancement to address any discovered gaps following additional user acceptance testing and recently introduced business and operational rules over the past couple years. Data migration scripts will need to be evaluated and developed.
- Design, stand-up, and support a robust, scalable operations and maintenance help desk system (EPA currently uses GroupLink Everything Help Desk) that delivers a variety of detailed user ticket summaries, service performance trending, and federal regulatory reporting capabilities.
- Modernize OGD's grants management tools and systems in order to reduce the administrative burden of grants and IA management for EPA staff.

- Enhance, maintain, operate, and provide user support to the Integrated Grants Management Systems (both IGMS Legacy & IGMS/NGGS). This may also include, but is not limited to, vital secondary systems, such as, Electronic Grants Records System (EGRS), Electronic Records for Interagency Agreements (ERIA), and the State Grant IT Application (SGITA).
- Provide data cleanup and error correction of IGMS Legacy, IGMS/NGGS, the Grants Data Mart, the Electronic Grants Records System (EGRS), and Electronic Records for Interagency Agreements (ERIA).
- Apply proven software engineering principles in the assistance of management, design, deployment, and maintenance task in the transition to the Grants Management software solution.
- Enhance, maintain, operate, and provide user support for the Case Application for Debarment and Suspension (CADS) application and the legacy Case Management System (CMS).
- Enhance, maintain, operate, and provide user support for the CFDA App.
- Enhance, maintain, operate, and provide user support for the Comply App and the legacy GCRA database housed in Lotus Notes.
- Support OGD in aligning with the OMB's IT Shared Services Strategy in order to explore IT investments government-wide
- Develop training, as needed, to familiarize EPA on the user operation of OGD Systems.
- Develop and support ancillary grant applications to support future grants management requirements.
- Ensure compliance with Federal and EPA regulations, policies, and procedures (i.e. 508 Compliance and Security requirements and regulations, etc.) (see PWS Section 2.0 and Section II).

With EPA's procurement of various cloud offerings, the Agency expects to gain efficiencies through information sharing and information safeguarding by utilizing a common IT architecture. This common architecture and consolidated operations will improve mission outcomes as an increasing number of Lotus Notes applications are migrated to this virtual cloud environment. This task order is designed to satisfy IT cloud software engineering activities. The contractor is expected to adapt to emerging/changing requirements as well as leading-edge cloud technologies as new offerings become available. In addition to performing software engineering activities, the contractor may be called to perform technical support for developed cloud applications. The contractor will provide software engineering expertise for multiple architectures, including, but not limited to:

- Microsoft Government Cloud Offerings
- Integrated hybrid architecture utilizing the Microsoft Government Cloud and web technologies hosted within EPA's data centers

- Web technologies hosted within EPA's data centers

3. Reporting Requirements:

3.0 The contractor shall produce a monthly financial status report (MFSR), as Task 2 deliverable, to be submitted within eight (8) days after the close of the contractor monthly invoice cycle. This report shall include the following:

3.0.1 For the current reporting period, display the amount claimed.

3.0.2 For the cumulative period and the cumulative task order life display: the amount shown on the latest task order amendment amount; the amount obligated, the amount currently claimed (including any fees); amount paid; amount suspended; amount disallowed; and remaining approved amount. The remaining approved amount is defined as the latest task order amendment amount, less the total amount originally invoiced, plus total amount disallowed.

3.0.3 Labor hours.

3.0.3.1 For the current reporting period, display the expended direct labor hours and costs broken out by task order labor hour category for the prime contractor and each sub-contractor and consultant.

3.0.3.2 For the cumulative task order period and the cumulative task order life display: the negotiated, expended, and remaining direct labor hours and costs broken out by the task order labor hour categories for the prime contractor and each sub-contractor and consultant.

3.0.3.3 Display the estimates of remaining direct labor hours and costs required to complete the task order.

3.0.3.4 Display the report period and cumulative fees and awards costs.

3.0.4 Display the current dollar ceilings in the task order, net amount invoiced, and remaining amounts for the following categories: Direct labor hours, program management, and Other Direct Costs (ODCs).

3.0.5 Unbilled allowable costs. Display the total costs incurred, but unbilled, for the current reporting period and cumulative for the task order.

3.1 For financial accounting purposes, it is also necessary for the contractor to provide a breakdown of costs associated with contract line item number references for all tasks or subtasks expended within every monthly financial status report and invoice (as identified in Task 2 deliverables table). This is necessary because funding will be from several different sources.

3.2 The contractor's management reporting shall consist of preparing the content included in the Monthly Status Reports (MSRs) and the Monthly Financial Status Reports (MFSRs). The contractor shall produce content for all MSRs by the 5th day of each calendar month. The monthly status reports shall include: updated project schedule and progress in each task toward achievement of project milestones. Any risks or challenges that are discovered by the contractor that have potential for causing delay in implementation of the project within established milestones shall be detailed in the monthly program management reviews and weekly status reports and presented for EPA review and exploration of remediation action(s) with contractor in order to mitigate the likelihood of negative impacts to the project schedule. The MFSR shall include sufficient detail for EPA COR to determine costs billed to EPA are necessary and reasonable. In addition, the MFSR shall include a project budget burndown summary.

4. Clearance Required:

4.0 The information for this project includes information protected by the Privacy Act. A basic National Agency Check with Inquiries and Credit (NACIC) security clearance is required for all contractors, including any employed subcontractors, performing work under this PWS. The NGGS Systems of Records Notice (SORN) is currently in progress and will be a part of a consolidated Agency-wide SORN. The SORN will be final approved and details shared with the contractor awardee prior to the NGGS system launch. The SORN will appropriately identify this system and its data to be fully compliant with SORN and Privacy Act.

5. Scope of Work

5.0 This PWS encompasses the ongoing modernization/enhancement development and support for the Grants and Debarment program systems of the Agency. Details for specific work are listed in the task description

sections below.

5.1 The contractor shall be responsible for staffing, delivering quality products and deliverables, and administrative and project performance reporting. The contractor will ensure the project activities follow a minimum of Software Engineering Institute (SEI) Capability Maturity Model (CMM) Level II certification policies and practices, or some equivalent.

5.2 In order for the Government to continue to realize the potential process improvements identified through its support of Lean Government initiatives and business analysis efforts, the contractor shall provide analytical, project management, and technical expertise required in developing, deploying, and maintaining solutions that meet the Government's needs. The contractor shall use proven industry standards and best practices in its software engineering activities. During these tasks, the contractor shall comply with 29 U.S.C. 794d. Section 508 as well as Federal and EPA standards for software design and development. All deliverables produced by the contractor are subject to quality reviews or audits by the Government. The contractor shall be responsible for addressing assigned action items from quality findings within a timeframe mutually agreed upon by the contractor and Government and within 30 business days of request by the Government.

5.3 The contractor's application(s) shall effectively store information and manage it centrally in order to support data re-use across the business process and make it available to specified EPA personnel. Additionally, these application(s) shall support the Government by automating the sequence of steps and business rules required to move activities through their business lifecycle. These application(s) shall provide extensive and dynamic workflow capabilities, allowing Government the ability to assign/reassign tasks, and to automatically notify and efficiently direct an assignee to a workflow assignment. These applications shall support electronic signatures and shall be fully compliant with EPA's requirements for official signature/authorization (see Applicable Cybersecurity Task Checklist and Section II, Task E).

5.4 The application(s) deployed by the contractor shall be fully compliant with Federal and EPA Risk Management Framework (RMF) and continuous security monitoring requirements, and support account access, security, and privacy policies and procedures. The contractor shall follow government standards for safeguarding sensitive information that includes Personally Identified Information (PII) and Confidential Business Information (CBI) data. All applications developed/configured by the contractor shall support the agency-wide account directory service initiative, which allows users to authenticate once in order to access multiple applications. At a minimum,

the application(s) developed by the contractor shall provide a secure interface that is only accessible to authorized users with valid/active accounts, ranging from limited to unlimited access. In addition, this application(s) shall be able to display warnings and rules of behavior information to users accessing this application(s).

5.5 EPA continues to embrace agile software development approach and, as such, has moved from a traditional development process to a more iterative method. The contractor shall employ the agile approach for assigned software development and will implement adaptive planning, early delivery, evolutionary development, rapid and flexible response to change, and continual improvement. Software modernization/enhancement and development within this project is to follow a minimum viable product (MVP)/Agile development methodology (i.e. Scrum, Lean, or Kanban); whereby, the contractor works with EPA to identify and prioritize the 'must have' critical business requirements and gaps and incrementally deliver quality operational software work packages (via development sprints). The MVP, which emerges out of user testing, must fall within the scope of the task descriptions within this PWS.

SECTION II

6.0 Following each listed task below, there is a table outlining deliverables of the work task. These work items will be delivered in electronic form. Unless otherwise specified, all electronic versions of documentation shall be created in Microsoft Office (Word, PowerPoint, or Excel) format. In addition to deliverables, the contractor may provide work products to EPA. A work product is an intermediate or 'work-in-progress' product which may be provided to EPA in order to give early visibility into the final product or to solicit comments from EPA. A work product does not undergo the formal product delivery processes, (i.e. technical editing, quality assurance review and delivery to the COR, or the designated ACOR in the COR's absence). All data and work products are described in the appropriate task descriptions of this PWS and belong solely to EPA.

6.1 Task # 1 – IGMS/NGGS System Modernization/Enhancement Development Analysis and Roadmap Proposal Plan (SDARPP)

6.1.0 The contractor's IGMS/NGGS System Modernization/Enhancement Development Analysis and Roadmap Proposal Plan (SDARPP) shall include suggestions for where the contractor can leverage or adapt existing development, systems, or processes that have the potential to maximize the Agency's cost savings, when feasible.

6.1.1 The contractor shall collaborate with the EPA project manager, system owner (product owner), and technical members of the integrated project team (IPT) to understand the 'as is' and 'to be' systems requirements to produce the SDARPP. The Contracting Officer Representative (COR), or the Alternate Contracting Officer's Representative (ACOR), in the COR's absence, may approve the SDARPP as submitted, or the COR, ACOR, the Contracting Officer (CO), and the contractor shall participate in at a minimum, one teleconference call to discuss the SDARPP.

6.1.2 The contractor's SDARPP shall include the contractor's identified "Risk Management Plans with Mitigating Factors" in accordance with industry standard best practices and Project Management Institute (PMI) Project Management Body of Knowledge (PMBoK) guide.

Task 1 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. IGMS/NGGS System Modernization/Enhancement Development Analysis and Roadmap Proposal Plan (SDARPP)	Determined jointly by OGD and the contractor. Not to exceed 45 days after award of contract.	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents (including supporting documents and resumes) shall be delivered on time.

7.1 Task # 2 – Program Management

7.1.0 For all PWS tasks, the contractor shall be responsible for all Task #1 requirements and for managing costs within the budget parameters The contractor's program manager, identified as Key Personnel and the primary contractor point of contact to the government is responsible for ensuring that the required quality levels and schedules (as described in this PWS and QASP) are maintained and schedule dates are met, shall be responsible for receiving information related to real or potential problem(s) as soon as possible.

7.1.1 The contractor shall lead scheduled monthly management reviews, weekly project status update, and operations and maintenance (as

applicable) meetings as well as participate in ad hoc meetings when the COR provides the contractor with a written request. For ad hoc meetings, the COR will consult with the contractor; however, the COR will be the individual who schedules and coordinates the meeting agendas for ad hoc meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone, and during meetings when the COR provides the contractor with a written request. The COR and/or the Alternate COR (ACOR) may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this PWS, the Program Manager shall first ask the COR whether the meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense. No travel expense shall be authorized without prior government approval.

7.1.2 The contractor shall develop and maintain a project plan that details the sequencing of the PWS tasks as well as expected delivery dates for key products and services. The contents of the project plan will be determined jointly by OGD and the contractor. The project plan will be delivered to EPA within 45 days of contract award. The contractor shall continue to maintain the plan's currency as priorities change and other factors influence the delivery of effort for the PWS's tasks. The contractor shall be prepared to discuss the project plan's management processes, expenditure tracking, issues, any schedule delays, and architecture at these meetings, if the COR provides the contractor with a written request prior to any meeting. The contractor's expenditure tracking shall include current staffing as well as other significant expenditures that the COR requests. The project plan shall detail the sequencing of the many PWS tasks as well as expected delivery dates for key products and services. *The contractor shall report on plan progress and keep the plan updated.*

7.1.3 The contractor shall immediately notify the COR, ACOR, and CO of all actual or potential problems that arise, or could potentially be encountered, and/or scheduled delivery dates that cannot be met. The contractor's notification regarding actual or potential problems shall be by 1) telephone and Problem Notification Reports (PNRs), or 2) e-mail and PNRs. The contractor shall raise any issues of concern or questions related to the activities in this PWS to the COR, ACOR, and CO.

7.1.4 The contractor shall also assist EPA, as directed, in finalizing all

project activities in order to formally close the project or a project phase. The administrative activities involved in this task include, but are not limited to, collaborating with EPA to reconcile any invoicing and/or funding issues and/or complete de-obligation action(s) (if applicable), archiving project materials, and documenting lessons learned.

7.1.5 The contractor shall provide project management and planning services. The contractor shall have the capability to manage large projects applying the Project Management Institute best practices (e.g., Project Management Body of Knowledge, PMBOK) and IC agency level software development lifestyle standards (i.e. DIA's Service Delivery Standard (SDS)).

7.1.6 Meeting agendas and materials are to be provided to the COR by the contractor no later than 2 business days prior to the meeting, while meeting minutes are to be provided to the COR no later than 3 business days after the meeting, unless otherwise directed by the COR. The contractor shall produce Technical/Status Meeting within 5 days after the meeting.

7.1.7 Project performance shall be monitored by the contractor regularly so that potential problems can be identified in a timely manner and corrective action can be taken, when necessary. The contractor shall support EPA, as directed, in this effort by tracking and measuring new and ongoing activities, monitoring project variables (costs, effort, and scope) against the project baseline in order to keep the project on-track, on-time, and within budget, performing integrated change control so only approved changes are implemented, verifying and controlling scope, performing quality control, maintaining the project schedule and plans, measuring project status using performance metrics, and identifying and managing issues and risks (via issues log and risk register). The contractor shall assist EPA in communicating to stakeholders the status of the project, analysis activities, and project findings.

7.1.8 EPA will provide a Quality Assurance Surveillance Plan (QASP) to monitor the Contractor's performance. The QASP will provide oversight help to ensure that service levels reach and maintain the required levels for performance for all tasks identified within the PWS.

7.1.9 The contractor shall meet with the COR and/or ACOR and other appropriate EPA personnel on a monthly basis to review key activities and milestones and to plan for upcoming activities.

7.1.10 The COR and/or ACOR must be present at meetings attended by other EPA personnel. Only contractor personnel necessary for each meeting should attend. The meetings may occur in person at EPA or contractor's site or via conference call.

7.1.11 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include, but is not limited to:

Providing a method/system/process for gathering and review of incoming requirements.

Providing analysis and feedback about feasibility of incoming requirements, as needed by OGD.

Providing line of sight tracking of approved requirements to deliverables.

7.1.12 The contractor shall, as directed by OGD, conduct Earned Value Management (EVM) reporting, including actual expenditures and milestones data, as well as provide EVM calculations and analysis to OGD. This includes supporting OGD in decomposing tasks into control accounts and work packages, monitoring progress and expenditures, monthly reporting of progress and expenditures, and mitigation of variance.

Task 2 Deliverables

Name	**Due (if applicable)**	**Acceptance Criteria**
1. Project Plan	Determined jointly by OGD and the contractor. Not to exceed 45 days after award of contract.	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents (including supporting documents and resumes) shall be delivered on time.

2. Monthly Status Reports (MSRs)	Due on the 5th day of each calendar month	Monthly Status Reports shall include, but not be limited to, high-level project roadmap and schedule Gantt chart, high-level module modernization/enhancement punch lists (diagram showing modules in queue, in development, in system testing, in user acceptance testing, in training, completed modernization/enhancement, and implemented), percentages of work completed for each contract line item (CLIN) or task, summary of work accomplished during the month, summary of work to be accomplished in the following month, operations and maintenance (O&M) ticket summary (if applicable), and any identified risks and/or challenges to the project scope, budget and schedule. Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
3. Monthly Financial Status Reports (MFSRs)	Due eight (8) days of contractor monthly invoice end.	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors (see PWS paragraph 3.0). Documents shall be delivered on time.
4. Monthly Invoices	Due on the 5th day of each calendar month	Invoices shall be prepared and submitted in accordance with task order clause EPAAR 1552.232-70 Submission of Invoices (May 2019).
5. Technical/Status Meeting Reports	Due within 5 days of meeting	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
6. Issues Log	Due on the 5th day of each calendar month (or as directed by EPA)	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
7. Risk Register	Due on the 5th day of each calendar month (or as directed by EPA)	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
8. EVM Reports	Due on the 5th day of each calendar month (or as directed by EPA)	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
9. Quality Control Plan	Due within 15 days of contract award.	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.

7.2 Task # 3 – IGMS Legacy Modernization/Enhancement, Operations and Maintenance, Software Releases, and Support (Base Year)

7.2.0 Project Management

7.2.0.0 Since planning is critical to a successful deployment of the application(s), the contractor shall assist, as instructed by the Government, in a variety of planning activities, including the management of project integration, scope, schedule, costs, quality, communications, and risks. The contractor shall support EPA in developing agreed upon deliverables for project milestones and establish criteria related to schedule compliance and quality of deliverables in order to evaluate performance. As part of this task, the contractor shall work closely with EPA on developing all the project plans required to create a project baseline, including project and quality management plans. The contractor shall provide a quality control plan detailing the contractor methodologies employed to conduct quality service oversight and delivery through the contract performance period. Any updates to the contractor quality control plan shall be communicated to EPA within 15 days of any change(s). In addition, the contractor shall also support or be assigned responsibility by the Government for defining scope, creating Work Breakdown Structures (WBS), establishing and participating in an Integrated Project Team (IPT) and project business requirements and software modernization/enhancement workgroups, identifying and analyzing business and system requirements and risks, as well as developing project schedules, detailed cost estimates, and quality control metrics and checklists.

7.2.0.1 The contractor shall assist EPA, as directed, in tracking and managing the project schedule, monitoring and managing project risks, tracking and providing routine project performance and status reporting (on weekly and monthly basis), updating and maintaining high-level project status dashboards, and maintaining quality assurance on deliverables. This includes assisting the Government in the oversight of software engineering activities to minimize future schedule and cost overrun risks associated with deploying an operational system to EPA. In addition to directing and managing the execution of the project, the contractor shall perform necessary quality control remediations, as necessary, in response to EPA quality reviews. The contractor shall also: manage change requests, facilitate/participate in regular status meetings,

communicate project information, and manage stakeholder expectations.

7.2.0.2 The contractor shall lead scheduled weekly development working session and weekly operations and maintenance meetings as well as participate in ad hoc meetings when the COR provides the contractor with a written request. For ad hoc meetings, the COR will consult with the contractor; however, the COR will be the individual who schedules and coordinates the meeting agendas for ad hoc meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone, and during meetings when the COR provides the contractor with a written request. The COR and/or the ACOR may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this PWS, the Program Manager shall first ask the COR whether the meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense. No travel expense shall be authorized without prior government approval.

7.2.0.3 The contractor shall apply current industrial software development best practices that include iterative and incremental project management techniques including the agile software development lifecycle. Software modernization/enhancement within this project is to follow a minimum viable product (MVP)/Agile development methodology; whereby, the contractor works with EPA to identify and prioritize the ‘must have’ critical business requirements and gaps and incrementally deliver quality software work packages (via development sprints). The MVP, which emerges out of user testing, must fall within the scope of the task descriptions within this PWS. The contractor shall facilitate weekly software modernization/enhancement, business, and system requirements working session meetings with EPA COR and subject matter experts, groom and maintain the software development backlog, collaborate with EPA to analyze and prioritize work as approved by EPA COR, and provide high-level modernization/enhancement progress reporting within weekly and monthly status reports. The contractor shall lead the contractor developer team, EPA subject matter experts, and key stakeholders to facilitate sprint planning, backlog refinement, sprint reviews, and sprint retrospective meetings.

7.2.0.4 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include, but is not limited to:

Providing a method/system/process for gathering and review of incoming requirements.

Providing analysis and feedback about feasibility of incoming requirements, as needed by OGD.

Providing line of sight tracking of approved requirements to deliverables.

7.2.1 Operations and Maintenance

7.2.1.0 EPA developed the Lotus Notes based Integrated Grants Management System (IGMS Legacy) to automate the grant process for all of EPA's grantees, support improved grant management, and reduce the Agency's cost to carry out its mission. Several instances of IGMS Legacy are supported for development, staging, and production purposes. The contractor shall provide day-to-day operational support to the following IGMS Legacy primary databases, including:

- **Work plans and Applications (W&As):** maintains Work plans, Certifications, and Applications – 3 Databases
- **Awards:** maintains Funding Recommendations, Commitment Notices, and Awards – 5 Databases
- **Post Awards:** provides for administrative and programmatic tracking of grant activities after award and before closeout – 2 Databases
- **Inter-Agency Agreements (IAs):** maintains interagency agreements between Federal Agencies – 3 Databases
- **Fellowships:** maintains academic grants made to students – 3 Databases
- **Electronic Grant File (EGF):** a one-stop reference database that documents all grant number families within IGMS Legacy.

7.2.1.1 To function properly, these modules rely on several support databases. The contractor shall provide day-to-day operational support to the following IGMS Legacy Support databases, which include:

- **Admin**: maintains IGMS Legacy lookup tables
- **Public Address Book (PAB)**: maintains information about the organizations and individuals that use and are referenced by IGMS Legacy
- **On-Line Help**: a centralized database containing detailed information on the use of each of the primary IGMS

Legacy databases

- **Agent Log**: lists actions and errors recorded during the execution of scheduled agents, i.e., Lotus Script programs
- **Feedback**: a discussion database forum that enables IGMS Legacy users, managers, and developers to report issues, ask questions, exchange ideas, and discuss any topic related to IGMS Legacy
- **Data Dictionary**: stores data element information from the primary IGMS Legacy modules. Each IGMS Legacy element may also contain a cross reference mapping to other systems, when applicable
- **Requirement Definition**: provides an electronic means for EPA users to develop and define requirements regarding IGMS Legacy and the grant award process
- **Requirement**: provides an electronic means for the team to define and store the requirements for the various tasks and get electronic approval from the EPA
- **Systems Engineering**: provides an electronic means for electronic delivery of the products
- **IGMS Fiscal Year Award Activity**: This is a generic database for capturing and analyzing grant award information using standard data forms and views based on IGMS Legacy components and data. These databases start with Fiscal Year (FY) 2001 through the current FY. A new database is added for each new fiscal year
- **Certified Project Officers database**: The Certified Project Officer Database (CPO DB) is a database containing information about EPA project officers and the status of their certification to function as project officers on EPA grants. It derives the basic employee information from the EPA Domino Directory. Additional information regarding certification status and training history are entered into the database as staff register for and complete their PO training. This database will be used by grants and program officer staff and managers to track the certification of project officers and to ensure that they are properly certified to administer EPA assistance agreements.
- **IGMS Grantee Compliance & Recipient Activity Summary**: a central repository for information related to EPA grant recipients, especially past performance data and active grants
- **Hotline**: provides an electronic means of recording hotline requests

- **Congressional Notification**: provides automated notification to members of Congress of grant awards that affect them. Notifications are generated via FAX. The database is used by the Congressional Liaison and is generated annually with each new FY
- **E-Apply**: a repository of EPA grant applications submitted through the government-wide Grants.gov portal
- **E-Apply - CDX Mail-in Database**: a database which receives raw input of Grants.gov applications prior to being parsed and transmitted to the EAPPLY database
- **IGMS Template Database**: contains templates of the various versions of all the databases
- **IGMS Web Address Book**: contains data on state users of the internet version of IGMS Legacy
- **Congressional Notification Database**: contains grants in the 5-day Congressional hold and provides data for Congressional notification
- **CMS**: a repository of cases being evaluated by the Suspension and Debarment Program (SDP)
- **Synopsis Database**: allows program offices to post synopses of announcements to be posted on Grants.gov.

7.2.2 User/Hotline Support

7.2.2.0 Integral to the ongoing day-to-day operations of IGMS Legacy is the IGMS user support through two formal avenues: 1) the OGD IT Systems Hotline (telephone), and 2) the OGD IT Systems Hotline database. The contractor shall staff the OGD IT Systems service desk team and deliver Tier 1 and Tier 2 User/Hotline Support. User requests for assistance encompass a broad spectrum of support needs including: operational training, data correction, workflow changes, editorship and access modifications, and document deletion requests. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support. The contractor shall use the OGD IT Systems Hotline (telephone) to receive user support requests pertaining to IGMS Legacy. The Hotline shall be available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database. Change and user support requests reports shall be provided on a monthly basis.

7.2.2.1 The contractor shall operate the OGD IT Systems Hotline (telephone) for the standard hours of operation previously listed. The contractor shall be available for extended hours of operation for OGD IT

Systems Hotline (telephone) support, if required by EPA. The contractor shall provide high-quality user support of the OGD IT Systems Hotline (telephone) & OGD IT Systems Hotline database following the contractor transition period. Quality characteristics include: timeliness, accuracy, and professional customer communication. Furthermore, the contractor shall document all requests to provide necessary data for reports.

7.2.2.2 The contractor shall provide technical support for the Lotus Notes client in terms of, but not limited to, installing, configuring, and troubleshooting user issues. In addition, upon the request and approval from OGD COR or ACOR, the contractor shall procure Lotus Notes user licenses of behalf of the Agency.

7.2.2.3 The contractor shall perform maintenance and support for the IGMS Legacy Databases and several other support databases in order for IGMS Legacy to function properly. This IGMS Databases include:

IGMS DATABASES

- Workplans and Applications (W&As)
- Awards
- Post Awards
- Inter-Agency- Agreements (IAs)
- Fellowships
- Electronic Grant File (EGF)

IGMS SUPPORT DATABASES

- Admin
- Public Address Book (PAB)
- On-line Help
- Agent Log
- Feedback
- Data Dictionary
- Requirement Definition
- Requirement
- Systems Engineering
- Hotline
- Congressional Notification
- E-Apply
- IGMS Grantee Compliance & Recipient Activity Summary

- IGMS Templates Database
- IGMS Web Address Book
- CDX Mail-in- Database
- IGMS Funding Opportunity Database
- IGMS FY Award Activity
- Certified Project Officers database
- Synopses Database
- Congressional Notification

7.2.3 Interface & Database Support

7.2.3.0 The contractor shall be responsible for day-to-day support and operations of the financial and IGMS/NGGS Pre-Award interfaces while responding to customer issues. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified), and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s).

7.2.3.1 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the IGMS Legacy financial and IGMS/NGGS Pre-Award interfaces behave as expected for any approved requirements and modernizations/enhancements. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the IGMS Legacy system are introduced.

7.2.3.2 To function properly, the IGMS Legacy provides data to several Oracle databases provided by the Grants Datamart. EPA utilizes Lotus Enterprise Integrator (LEI) to transform data into Oracle using one (1) LEI interface. The contractor shall assist in the day-to-day operational support of the data transfer and processing of the data for the Grants Datamart.

7.2.4 Decommissioning Support

7.2.4.0 As the Agency disinvests in the Lotus Notes product line, the contractor shall assist in retirement of IGMS Legacy and supporting Lotus

Notes applications by following the directives and guidance from the Environmental Information offices.

7.2.5 Software Releases

7.2.5.0 As the grants and IA business process has evolved and matured, the OGD has begun a shift towards periodic operation and maintenance (O&M) releases for IGMS Legacy implemented through a series of software modifications to various parts of the overall system. During each Fiscal Year, if required, the OGD team defines a number of O&M releases for each applicable database dependent upon the Division's evolving priorities and resource constraints. The actual number the OGD requests of O&M releases is determined during each annual OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each O&M release and the remaining work that the contractor shall perform for each applicable database. Based on an evaluation of the priorities and requirements, a modernization/enhancement and deployment schedule will be determined during periodic meetings with the OGD IT team. The contractor shall develop enhancements for each release according to the approved requirements. The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that these applications behave as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.2.5.1 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization agreed to by the contractor and EPA.

7.2.5.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to unit, end to end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancement. Defects discovered during

these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.2.5.3 Releases shall be consistent with EPA and government-wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to IGMS Legacy.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable Federal Information Processing Standards (FIPS) standards.

7.2.6 Datamart Cleanup and Development

7.2.6.0 The contractor shall design modifications to IGMS Legacy system in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in IGMS Legacy system as required by EPA. The contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.2.6.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.2.7 System Training Support

7.2.7.0 As OGD IGMS Legacy system evolves and matures, training may need to be provided to users in order for them to best utilize any

implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.2.7.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.2.7.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.2.7.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required by EPA.

7.2.7.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 3 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria

1. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
2. General Release Notes	Due no later than (NTL) three (3) days after release date	
3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release
4. Security Release Notes	Due no later than (NTL) three (3) days after release date	

5. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment.
6. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.
7. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. For IGMS Legacy: The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation at least? three (3) days before release.
8. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	
9. Weekly Ticket Activity Report	Due no later than (NTL) first three (3) days of each week.	Weekly ticket report shall include, but not be limited to: Ticket number, description, category, priority, open date/time, close date/time, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
10. Monthly Ticket	Due no later than (NTL) first three (3)	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority,

Summary Report	days of each month.	ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
10. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

7.4 Task # 4 –IGMS/NGGS Modernization/Enhancement, Operations and Maintenance, Software Releases, and Support

7.4.0 Project Management

7.4.0.0 Since planning is critical to a successful deployment of the application(s), the contractor shall assist, as instructed by the Government, in a variety of planning activities, including the management of project integration, scope, schedule, costs, quality, communications, and risks. The contractor shall support EPA in developing agreed upon deliverables for project milestones and establish criteria related to schedule compliance and quality of deliverables in order to evaluate performance. As part of this task, the contractor shall work closely with EPA on developing all the project plans required to create a project baseline, including project and quality management plans. The contractor shall provide a quality control plan detailing contractor methodologies employed to conduct quality service oversight and delivery through the contract performance period. In addition, the contractor shall also support or be assigned responsibility by the Government for defining scope, creating Work Breakdown Structures (WBS), establishing and participating in an Integrated Project Team (IPT) and project business requirements and software modernization/enhancement workgroups, identifying and analyzing business and system requirements and risks, as well as developing project schedules, detailed cost estimates, and quality control metrics and checklists.

7.4.0.1 The contractor shall assist EPA, as directed, in tracking and managing the project schedule, monitoring and managing project risks, tracking and providing routine project performance and status reporting (on weekly and monthly basis), updating and maintaining high-level project status dashboards, and maintaining quality assurance on deliverables. This includes assisting the Government in the oversight of

software engineering activities to minimize future schedule and cost overrun risks associated with deploying an operational system to EPA. In addition to directing and managing the execution of the project, the contractor shall assist EPA, as directed, in performing quality reviews, managing change requests, facilitating/participating in regular status meetings, communicating project information, and managing stakeholder expectations.

7.4.0.2 The contractor shall lead scheduled weekly modernization/enhancement working sessions and weekly operations and maintenance meetings as well as participate in ad hoc meetings when the COR provides the contractor with a written request. For ad hoc meetings, the COR will consult with the contractor; however, the COR will be the individual who schedules and coordinates the meeting agendas for ad hoc meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone, and during meetings when the COR provides the contractor with a written request. The COR and/or the ACOR may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this PWS, the Program or Project Manager, and the manager for any of the contractor's subcontractors that are working on any part of this PWS, shall first ask the COR whether the meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense. No travel expense shall be authorized without prior government approval.

7.4.0.3 The contractor shall apply current industrial software development best practices that include iterative and incremental project management techniques including the agile software development lifecycle. Software modernization/enhancement within this project is to follow a minimum viable product (MVP)/Agile development methodology; whereby, the contractor works with EPA to identify and prioritize the ‘must have’ critical business requirements and gaps and incrementally deliver quality software work packages (via development sprints). The MVP, which emerges out of user testing, must fall within the scope of the task descriptions within this PWS. The contractor shall facilitate weekly software modernization/enhancement, business, and system requirements working session meetings with EPA COR and subject matter experts, groom and maintain the software modernization/enhancement backlog, collaborate with EPA to analyze and prioritize work as approved by EPA COR, and provide high-level modernization/enhancement progress reporting within weekly and monthly status reports. The contractor shall lead the contractor developer team, EPA subject matter experts, and key stakeholders to facilitate sprint planning, backlog refinement, sprint

reviews, and sprint retrospective meetings.

7.4.0.5 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include, but is not limited to:

7.4.0.5.0 Providing a method/system/process for gathering and review of incoming requirements.

7.4.0.5.1 Providing analysis and feedback about feasibility of incoming requirements, as needed by OGD.

7.4.0.5.2 Providing line of sight tracking of approved requirements to deliverables.

7.4.1 Operations and Maintenance

7.4.1.0 EPA developed the IGMS/NGGS to automate the grant process for all of EPA's grantees, support improved grant management, and reduce the Agency's cost to carry out its mission. IGMS/NGGS is a J2EE Spring MVC-based software application that employs Oracle and Activiti Business Process Management (BPM) technologies to support and manage the grant workflows. This system is hosted at NCC and has development, staging/testing, and production environments (other available environments include: disaster recovery and training). More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition to operations and maintenance support, the contractor shall provide support, including but not limited to, the following areas listed below:

7.4.1.1 The contractor shall provide day-to-day operational support to the following IGMS/NGGS modules, including, but not limited to:

- **Pre-Awards:** maintains Funding Opportunities, Application Packages, and Applications
- **Awards:** maintains Funding Recommendations, Commitment Notices, Awards, Change Requests, and Amendments
- **Post Awards:** provides for administrative and programmatic tracking of grant activities after award and before closeout
- **Inter-Agency Agreements (IAs):** maintains interagency agreements between Federal Agencies

- **Application Administration:** maintains the user accounts, organizations, and other application administration features

7.4.2 User/Hotline Support

7.4.2.0 Integral to the ongoing day-today operations of IGMS/NGGS is the IGMS user support through two formal avenues: 1) the OGD IT Systems Hotline (telephone), and 2) the OGD IT Systems Hotline database. The contractor shall staff the OGD IT Systems service desk team and deliver Tier 1 and Tier 2 User/Hotline Support. User requests for assistance encompass a broad spectrum of support needs including: operational training, data correction, workflow changes, editorship and access modifications, and document deletion requests. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support. The contractor shall use the OGD IT Systems Hotline (telephone) to receive user support requests pertaining to IGMS/NGGS. The Hotline shall be available 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request will be recorded in a Hotline database. Change and user support request reports shall be provided on a monthly basis.

7.4.2.1 The contractor shall operate the OGD IT Systems Hotline (telephone) for the standard hours of operation previously listed. The contractor shall be available for extended hours of operation for OGD IT Systems Hotline (telephone) support, if required by EPA. The contractor shall provide high-quality user support for calls and requests of the OGD IT Systems Hotline (telephone) & OGD IT Systems Hotline database. Quality characteristics include timeliness, accuracy, and professional customer communication. Furthermore, the contractor shall document all requests to provide necessary data for reports.

7.4.2.2 The contractor shall perform maintenance and support for the IGMS/NGGS and several other support databases in order for IGMS/NGGS to function properly. This IGMS/NGGS support includes, but is not limited to:

- **Pre-Awards:** maintains Funding Opportunities, Application Packages, and Applications
- **Awards:** maintains Funding Recommendations, Commitment Notices, Awards, Change Requests, and Amendments
- **Post Awards:** provides for administrative and programmatic tracking of grant activities after award and before closeout
- **Inter-Agency Agreements (IAs):** maintains interagency agreements between Federal Agencies

- **Application Administration:** maintains the user accounts, organizations, and other application administration features

7.4.3 Interface & Database Support

7.4.3.0 The contractor shall be responsible for day-to-day support and operations of the financial, EPA's Geographic Information System (GIS), and Central Data Exchange (CDX)/ Grants.gov interfaces while responding to customer issues. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s). The IGMS Legacy system interfaces with multiple systems to include push and pull of data sources. The contractor shall support and modernize: these interfaces with NGGS, interfaces between NGGS and other OGD support systems, and interfaces between NGGS and other potential federal systems in accordance with emerging and future EPA and federal requirements.

7.4.3.1 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the financial, GIS, and CDX/Grants.gov interfaces behave as expected for any approved requirements and modernization/enhancement. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the IGMS/NGGS system are introduced.

7.4.3.2 To function properly, the IGMS/NGGS provides data to several Oracle databases provided by the Grants Datamart. The contractor shall assist in the day-to-day operational support of the data transfer and processing of the data for the Grants Datamart.

7.4.4 Software Releases

7.4.4.0 Since IGMS/NGGS is the replacement system for the IGMS Legacy system, OGD will require regular periodic software releases to address fixes, O&M, and enhancements to various modules of the overall system in order to address OGD's evolving priorities and resource constraints. The contractor shall follow EPA guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code

developed or updated by the contractor to fulfill this requirement shall be the property of EPA. In addition, the modernization/enhancement of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval from the Agency for an alternative arrangement. All source code developed or updated to fulfill this requirement shall be the property of EPA.

7.4.4.1 The contractor shall participate in OGD change control process for researching proposed change requests, providing evaluation material required for EPA decision makers, and implementing and documenting EPA approved changes from users of the grants management systems. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

7.4.4.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancement. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.4.4.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

7.4.4.4 The contractor shall be responsible for the configuration of Commercial Off-the-Shelf (COTS) products that support both contractor-developed and existing OGD system application software.

7.4.4.5 The actual number of OGD requests for software releases will be determined by EPA during the OGD IT planning process. The EPA will identify and provide the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on the priorities and requirements provided by EPA, a modernization/enhancement and deployment schedule will be developed by contractor and jointly determined during periodic contractor and EPA meetings.. The contractor shall develop enhancements for each release according to EPA-approved requirements. Software releases shall be consistent with EPA and government-wide standards and policies and approved by EPA prior to being implemented. Furthermore, releases shall be tested by the contractor for 508 compliance and reviewed by the contractor for security concerns and impact to IGMS/NGGS.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

7.4.4.6 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

7.4.5 Datamart Cleanup and Development

7.4.5.0 The contractor shall design modifications to IGMS/NGGS in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in IGMS/NGGS, as required by EPA. The

contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.4.5.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.4.6 System Training Support

7.4.6.0 As OGD IGMS/NGGS system evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.4.6.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.4.6.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.4.6.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

7.4.6.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 4 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
2. General Release Notes	Due no later than (NTL) three (3) days after release date	
3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help

		(software) and system documentation three (3) days before release
4. Security Release Notes	Due no later than (NTL) three (3) days after release date	
5. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for EPA COR/PM and subject matter experts to review for completeness.
6. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
7. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
8. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
9. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all of the source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
10. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment.
11. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.

12. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. For IGMS/NGGS: The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
13. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	
14. Weekly Ticket Activity Report	Due no later than (NTL) first three (3) days of each week.	Weekly ticket report shall include, but not be limited to: Ticket number, description, category, priority, open date/time, close date/time, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
15. Monthly Ticket Summary Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
16. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

7.5 Task # 5 – Office of Grants and Debarment (OGD) Support Systems Modernization/Enhancement, Operations and Maintenance, Software Releases, and Support

7.5.0 Project Management

7.5.0.0 Since planning is critical to a successful deployment of the application(s), the contractor shall assist, as instructed by the Government, in a variety of planning activities, including the management of project integration, scope, schedule, costs, quality, communications, and risks. The contractor shall support EPA in developing agreed upon deliverables for project milestones and establish criteria related to schedule compliance and quality of deliverables in order to evaluate performance. As part of this task, the contractor shall work closely with EPA on developing all the project plans required to create a project baseline, including project and quality management plans. The contractor shall provide a quality control plan detailing contractor methodologies employed to conduct quality service oversight and delivery through the contract performance period. In addition, the contractor shall also support or be assigned responsibility by the Government for defining scope, creating Work Breakdown Structures (WBS), establishing and participating in an Integrated Project Team (IPT) and project business requirements and software modernization/enhancement workgroups, identifying and analyzing business and system requirements and risks, as well as developing project schedules, detailed cost estimates, and quality control metrics and checklists.

7.5.0.1 The contractor shall assist EPA, as directed, in tracking and managing the project schedule, monitoring and managing project risks, tracking and providing routine project performance and status reporting (on weekly and monthly basis), updating and maintaining high-level project status dashboards, and maintaining quality assurance on deliverables. This includes assisting the Government in the oversight of software engineering activities to minimize future schedule and cost overrun risks associated with deploying an operational system to EPA. In addition to directing and managing the execution of the project, the contractor shall assist EPA, as directed, in performing quality reviews, managing change requests, facilitating/participating in regular status meetings, communicating project information, and managing stakeholder expectations.

7.5.0.2 The contractor shall lead scheduled weekly modernization/enhancement working session and weekly operations and maintenance meetings as well as participate in ad hoc meetings when the COR provides the contractor with a written request. For ad hoc meetings, the COR will consult with the contractor; however, the COR will be the individual who schedules and coordinates the meeting agendas for ad hoc meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone, and during meetings when the COR provides the contractor with a written request. The COR and/or the ACOR may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this PWS, the Program or Project Manager, and the manager for any of the contractor's subcontractors that are working on any part of this PWS, shall first ask the COR whether the meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense. No travel expense shall be authorized without prior government approval.

7.5.0.3 The contractor shall apply current industrial software development best practices that include iterative and incremental project management techniques including the agile software development lifecycle. Software modernization/enhancement within this project is to follow a minimum viable product (MVP)/Agile development methodology; whereby, the contractor works with EPA to identify and prioritize the ‘must have’ critical business requirements and gaps and incrementally deliver quality software work packages (via development sprints). The MVP, which emerges out of user testing, must fall within the scope of the task descriptions within this PWS. The contractor shall facilitate weekly software modernization/enhancement, business, and system requirements working session meetings with EPA COR and subject matter experts, groom and maintain the software modernization/enhancement backlog, collaborate with EPA to analyze and prioritize work as approved by EPA COR, and provide high-level modernization/enhancement progress reporting within weekly and monthly status reports. The contractor shall lead the contractor developer team, EPA subject matter experts, and key stakeholders to facilitate sprint planning, backlog refinement, sprint reviews, and sprint retrospective meetings.

7.5.0.6 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include, but is not limited to:

7.5.0.7 Providing a method/system/process for gathering and review of incoming requirements.

7.5.0.8 Providing analysis and feedback about feasibility of incoming requirements, as needed by OGD.

7.5.0.9 Providing line of sight tracking of approved requirements to deliverables.

7.5.1 Electronic Grants Records System (EGRS) / Electronic Records of Interagency Agreements (ERIA)

7.5.1.1 Operations and Maintenance

7.5.1.1.1 EPA developed an electronic records management solution using Documentum technology in combination with a web front-end interface. This solution supports records management for both the grants (currently for EPA Headquarters (HQ) and some Regional grants administrative offices) and the interagency agreement (IA) records (for the IA Shared Service Center of HQ and Region 10-comprising US Pacific Northwest states). The EGRS/ERIA service interfaces with the Grants Datamart to query and produce records directly into the Documentum container. The contractor shall provide day-to-day operational support for this solution. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition to operations and maintenance support, the contractor shall provide support, including but not limited to, the following areas listed below:

7.5.1.2 User/Hotline Support

7.5.1.2.0 Integral to the ongoing day-to-day operations of this project is the user support through two formal avenues: OGD IT Systems Hotline telephone support and/or OGD IT Systems Hotline Database. The contractor shall staff the OGD IT Systems service desk team and deliver Tier 1 and Tier 2 User/Hotline Support for this task.

7.5.1.2.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support.

7.5.1.2.2 The users engage the OGD IT Systems Hotline (telephone) to submit user support requests pertaining to EGRS/ERIA. The Hotline shall be available from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request shall be recorded in a Hotline database.

7.5.1.2.3 This method of support can be combined with in conjunction with provisioning the OGD IT Systems support line and can record user requests in the same ticket system as OGD IT Systems Hotline tickets.

7.5.1.3 Interface & Database Support

7.5.1.3.0 Customers utilize the two intranet (2) URLs (egrs.epa.gov or eria.epa.gov) for a consolidated website/user interface for the tool. This user interface is a combination of technologies: Microsoft SharePoint and Cold Fusion interacting with Documentum and Oracle.

7.5.1.3.1 The contractor shall be responsible for day-to-day support and operations of the website while responding to customer issues. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s).

7.5.1.3.2 As the EGRS/ERIA product and business process evolves and matures, the OGD has begun a shift towards periodic operation and maintenance (O&M) schedule for implementing a series of software modifications to the interface. The contractor shall be responsible for modernization/enhancements, testing, and implementation of any approved modifications. The primary objective of this upkeep is to maintain proper sync of PDF records generated with the data provided from IGMS Legacy and IGMS/NGGS. From time to time, data fields on

forms in IGMS Legacy and IGMS/NGGS change, and the records generated capture any new data elements generated.

7.5.1.3.3 The contractor shall also be responsible for providing documentation regarding the configuration of COTS software and configuration management of source code and build scripts for all developed software.

7.5.1.3.4 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the EGRS/ERIA products behave as expected for any approved requirements and modernization/enhancements. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the EGRS/ERIA products are introduced.

7.5.1.3.5 To function properly, the EGRS/ERIA product relies on several Oracle databases provided by the Grants Datamart. The contractor shall provide day-to-day operational support of the data transfer and processing of the data for EGRS/ERIA. This includes, but is not limited to:

The data flow from the Grants Datamart to EGRS Processing

The PDF forms generation of records

The processing of Attachments

7.5.1.4 Software Releases

7.5.1.4.0 For the EGRS/ERIA product, OGD will require regular periodic software releases to address fixes, O&M, and enhancements to various modules or the overall system in order to address OGD's evolving priorities and resource constraints. The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the modernization/enhancement of all source code shall be on government furnished equipment, EPA

infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

7.5.1.4.1 The contractor shall participate in OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grants user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

7.5.1.4.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancements. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.5.1.4.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

7.5.1.4.4 The contractor shall be responsible for the configuration of COTS products that support all developed software.

7.5.1.4.5 The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each

software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a modernization/enhancement and deployment schedule will be determined during periodic meetings with the OGD IT team. The contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to EGRS/ERIA.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

7.5.1.5 Datamart Cleanup and Development

7.5.1.5.0 The contractor shall design modifications to EGRS/ERIA in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in EGRS/ERIA as required by EPA. The contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.5.1.5.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.5.1.6 System Training Support

7.5.1.6.0 As EGRS/ERIA evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.5.1.6.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.5.1.6.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.5.1.6.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

7.5.1.6.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 7.5.1 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria

1. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
2. General Release Notes	Due no later than (NTL) three (3) days after release date	
3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release
4. Security Release Notes	Due no later than (NTL) three (3) days after release date	

5. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
6. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
7. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
8. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
9. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all of the source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
10. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment.
11. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.

12. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
13. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	

14. Weekly Ticket Activity Report	Due no later than (NTL) first three (3) days of each week.	Weekly ticket report shall include, but not be limited to: Ticket number, description, category, priority, open date/time, close date/time, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
15. Monthly Ticket Summary Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
16. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

7.5.2 Case Application for Debarment and Suspension (CADS) Operations and Maintenance, Software Releases, and Support

7.5.2.0 Operations and Maintenance

7.5.2.0 EPA developed a custom solution employing SharePoint (On Premise) and MS SQL Server technologies in order to support case management activities for the Suspension and Debarment Program (SDP). The contractor shall provide day-to-day operational support for this solution. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition to operations and maintenance support, the contractor shall provide support, including but not limited to, the following areas listed below:

7.5.2.1 User/Hotline Support

7.5.2.1.0 Integral to the ongoing day-to-day operations of this project is the user support through two formal avenues: OGD IT Systems Hotline telephone support and/or OGD IT Systems Hotline Database. The contractor shall staff the OGD IT Systems service desk team and deliver Tier 1 and Tier 2 User/Hotline Support for this task.

7.5.2.1.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, user interface/website issues. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support.

7.5.2.1.2 The users engage the OGD IT Systems Hotline (telephone) to submit user support requests pertaining to CADS. The Hotline shall be available from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request shall be recorded in a Hotline database.

7.5.2.1.3 This method of support can be combined with in conjunction with provisioning the OGD IT Systems support line and can record user requests in the same ticket system as OGD IT Systems Hotline tickets.

7.5.2.2 Interface and Database Support

7.5.2.2.0 The contractor shall be responsible for day-to-day support and operations of the transfer of archived cases from the CADS system to the CADS Records Repository that utilized MS SQL Server. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s).

7.5.2.2.1 To function properly, CADS relies on the CADS Records Repository for the archiving of cases. The contractor shall provide day-to-day operational support of the CADS Records Repository and the custom source code that keeps it operational.

7.5.2.3 Software Releases

7.5.2.3.0 For the CADS product, OGD will require regular periodic software releases to address fixes, O&M, and enhancements to various modules or the overall system in order to address OGD's evolving priorities and resource constraints. The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the modernization/enhancement of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

7.5.2.3.1 The contractor shall participate in OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grants user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

7.5.2.3.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancement. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.5.2.3.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the

software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

7.5.2.3.4 The contractor shall be responsible for the configuration of COTS products that support all developed software.

7.5.2.3.5 The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a modernization/enhancement and deployment schedule will be determined during periodic meetings with the OGD IT team. The contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to CADS.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

7.5.2.3.6 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

7.5.2.4 Datamart Cleanup and Development

7.5.2.4.0 The contractor shall design modifications to CADS in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in CADS as required by EPA. The contractor shall also provide consultation services, as required by EPA,

with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.5.2.4.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.5.2.5 System Training Support

7.5.2.5.0 As CADS evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.5.2.5.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.5.2.5.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.5.2.5.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

7.5.2.5.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 7.5.2 Deliverables and Due Dates

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3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release
4. Security Release Notes	Due no later than (NTL) three (3) days	

	after release date	
5. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
6. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
7. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
8. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
9. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all of the source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
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15. Monthly Ticket Summary Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
16. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

7.5.3 Catalog of Federal Domestic Assistance (CFDA) Operations and Maintenance, Software Releases, and Support

7.5.3.0 Operations and Maintenance

7.5.3.0.0 EPA developed a custom business process app employing SharePoint (Online) and Angular in order to support the annual CFDA submission cycle. The contractor shall provide day-to-day operational support for this solution. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition to operations and maintenance support, the contractor shall provide support, including but not limited to, the following areas listed below:

7.5.3.1 User/Hotline Support

7.5.3.1.0 Integral to the ongoing day-to-day operations of this project is the user support through two formal avenues: OGD IT Systems Hotline telephone support and/or OGD IT Systems Hotline Database. The contractor shall staff the OGD IT Systems IGMS/NGGS service desk team and deliver Tier 1 and Tier 2 User/Hotline Support for this task.

7.5.3.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support.

7.5.3.2 The users engage the OGD IT Systems Hotline (telephone) to submit user support requests pertaining to CFDA. The Hotline shall be available from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request shall be recorded in a Hotline database.

7.5.3.3 This method of support can be combined with in conjunction with provisioning the OGD IT Systems support line and can record user requests in the same ticket system as OGD IT Systems Hotline tickets.

7.5.3.2 Software Releases

7.5.3.2.0 For the CFDA product, OGD will require regular periodic software releases to address fixes, O&M, and enhancements to various modules or the overall system in order to address OGD's evolving priorities and resource constraints. The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the modernization/enhancement of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

7.5.3.2.1 The contractor shall participate in OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grant user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

7.5.3.2.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to: unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancements. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.5.3.2.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

7.5.3.2.4 The contractor shall be responsible for the configuration of COTS products that support all developed software.

7.5.3.2.5 The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a modernization/enhancement and deployment schedule will be determined during periodic meetings with the CFDA team. The contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government-wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to CFDA.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

7.5.3.2.6 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

7.5.3.3 Datamart Cleanup and Development

7.5.3.3.0 The contractor shall design modifications to CFDA in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in CFDA as required by EPA. The contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.5.3.3.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.5.3.4 System Training Support

7.5.3.4.0 As CFDA evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.5.3.4.1 The contractor shall support, as directed by OGD, establishment

of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.5.3.4.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.5.3.4.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

7.5.3.4.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 7.5.3 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other

		documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
2. General Release Notes	Due no later than (NTL) three (3) days after release date	
3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release
4. Security Release Notes	Due no later than (NTL) three (3) days after release date	
5. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
6. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).

7. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
8. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
9. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all of the source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
10. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment.
11. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.
12. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
13. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	
14. Weekly Ticket Activity Report	Due no later than (NTL) first three (3) days of each week.	Weekly ticket report shall include, but not be limited to: Ticket number, description, category, priority, open date/time, close date/time, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
15. Monthly Ticket Summary Report	Due no later than (NTL) first three (3) days of	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority, ticket duration, user name, user region, user department,

	each month.	user office/location, user phone number, technician name, and ticket status.
16. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

7.5.4 Comply Operations and Maintenance, Software Releases, and Support

7.5.4.0 Operations and Maintenance

7.5.4.0.0 EPA developed a custom business app employing SharePoint (Online), Angular, Node.js, and SQL Server in order to support grantee compliance activities. The contractor shall provide day-to-day operational support for this solution. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified) and assisting in identifying network or server outages. In addition to operations and maintenance support, the contractor shall provide support, including but not limited to, the following areas listed below:

7.5.4.1 User/Hotline Support

7.5.4.1.0 Integral to the ongoing day-to-day operations of this project is the user support through two formal avenues: OGD IT Systems Hotline telephone support and/or OGD IT Systems Hotline Database. The contractor shall staff the OGD IT systems IGMS/NGGS service desk team and deliver Tier 1 and Tier 2 User/Hotline Support for this task.

7.5.4.1.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support.

7.5.4.1.2 The users engage the OGD IT Systems Hotline (telephone) to submit user support requests pertaining to Comply. The Hotline shall be available from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request shall be recorded in a Hotline database.

7.5.4.1.3 This method of support can be combined with in conjunction with provisioning the OGD IT Systems support line and can record user requests in the same ticket system as OGD IT Systems Hotline tickets.

7.5.4.2 Interface and Database Support

7.5.4.2.0 The contractor shall be responsible for day-today support and operations of web services used in MS SharePoint Online and the Node.js/MS SQL Server technologies that are used by the Angular client. In addition, authentication and access tokens are being provided by Azure Active Directory (AD). More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified), and assisting in identifying network or server outages

7.5.4.2.1 The contractor shall also be responsible for providing documentation regarding the configuration of COTS software and configuration management of source code and build scripts for all developed software.

7.5.4.2.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the web services used by Comply behave as expected for any approved requirements and modernization/enhancement. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the Comply products are introduced.

7.5.4.3 Software Releases

7.5.4.3.0 For the Comply product, OGD will require regular periodic

software releases to address fixes, O&M, and enhancements to various modules or the overall system in order to address OGD's evolving priorities and resource constraints. The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the modernization/enhancement of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

7.5.4.3.1 The contractor shall participate in OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grants user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

7.5.4.3.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancement. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.5.4.3.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

7.5.4.3.4 The contractor shall be responsible for the configuration of COTS products that support all developed software. The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a modernization/enhancement and deployment schedule will be determined during periodic meetings with the OGD IT team. The contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government-wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to Comply.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

7.5.4.3.5 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

7.5.4.4 Datamart Cleanup and Development

7.5.4.4.0 The contractor shall design modifications to Comply in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in Comply as required by EPA. The contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.5.4.4.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.5.4.5 System Training Support

7.5.4.5.0 As Comply evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.5.4.5.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.5.4.5.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.5.4.5.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

7.5.4.5.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 7.5.4 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
2. General Release Notes	Due no later than (NTL) three (3) days after release date	
3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release

4. Security Release Notes	Due no later than (NTL) three (3) days after release date	
5. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
6. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
7. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
8. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
9. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all of the source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
10. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment.
11. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.
12. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system

		documentation three (3) days before release.
13. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	
14. Weekly Ticket Activity Report	Due no later than (NTL) first three (3) days of each week.	Weekly ticket report shall include, but not be limited to: Ticket number, description, category, priority, open date/time, close date/time, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
15. Monthly Ticket Summary Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
16. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

7.5.5 State Grants Information Technology Application (SGITA) and Maintenance, Software Releases, and Support

7.5.5.0 Operations and Maintenance

7.5.5.0.0 The State Grants Information Technology Application (SGITA) launched in response to Grants Policy Issuance 11-03 (available via Internet)., and now serves as EPA's new central database for grants, workplans, and progress reports. The Grants Policy 11-03 requires workplans and associated progress reports to prominently display currently

three essential elements: (1) the supporting EPA strategic plan goal; (2) the plan objective; and (3) the workplan commitments (plus time frame).

7.5.5.0.1 The Policy also instructs EPA Project Officers to upload workplans and progress reports for grant programs into SGITA. SGITA not only serves as the central repository for grants workplans, it also integrates with the OGD's IGMS Legacy and IGMS/NGGS to reduce data entry burden and minimize data duplication. Using SGITA, project officers need only attach the workplan and progress reports for applicable grants; all other data is readily available through IGMS Legacy and IGMS/NGGS. A quarterly email reminder is sent to project officers alerting them of missing reports or required actions so data is current. States with grants have read-only access to their grant information in SGITA.

7.5.5.0.2 The contractor shall provide day-to-day operational support for this solution. This shall include, but is not limited to, the following areas of support:

7.5.5.1 User/Hotline Support

7.5.5.1.0 Integral to the ongoing day-to-day operations of this project is the user support through two formal avenues: OGD IT Systems Hotline telephone support and/or OGD IT Systems Hotline Database. The contractor shall staff the OGD IT systems IGMS/NGGS service desk team and deliver Tier 1 and Tier 2 User/Hotline Support for this task.

7.5.5.1.1 User requests for assistance encompass a broad spectrum of support needs including: errors in processing of records, data correction, and user interface/website issues. The contractor shall coordinate with the NGGS project manager, technical lead, and EPA network support staff for Tier 3 level hotline support.

7.5.5.1.2 The users engage the OGD IT Systems Hotline (telephone) to submit user support requests pertaining to SGITA. The Hotline shall be available from 9:00 A.M. to 5:00 P.M. Eastern Standard Time (EST), Monday through Friday, 52 weeks per year with the exclusion of Federal Holidays. Each user request shall be recorded in a Hotline database.

7.5.5.1.3 This method of support can be combined with in conjunction with provisioning the OGD IT Systems support line and can record user requests in the same ticket system as OGD IT Systems Hotline tickets.

7.5.5.5 Interface & Database Support

7.5.5.2.0 Customers utilize a single intranet URL (https://ofmext.epa.gov/apex/sgita/f?p=SGITA:Home:) to access a hosted Cold Fusion web application. Furthermore, the application utilizes data provided from IGMS Legacy, IGMS/NGGS, and the Grants Datamart.

7.5.5.2.1 The contractor shall be responsible for day-today support and operations of the website while responding to customer issue. More specifically, the contractor shall assist in troubleshooting and fixing problems with the application, including, but not limited to: troubleshooting user issues, identifying and resolving software defects (which is when the software is functioning, but does not work as specified), and assisting in identifying network or server outages. In addition, the contractor shall assist OGD in assisting in the consolidation and evaluation of requested changes to the application(s).

7.5.5.2.2 The contractor shall also be responsible for providing documentation regarding the configuration of COTS software and configuration management of source code and build scripts for all developed software.

7.5.5.2.3 The contractor shall create test plans and scenarios, as well as conduct the various types of tests to ensure that the SGITA products behaves as expected for any approved requirements and modernization/enhancement. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to the SGITA products are introduced.

7.5.5.2.4 As the SGITA product and business process evolves and matures, the OGD will shift towards a periodic operation and maintenance (O&M) schedule for implementing a series of software modifications to the application and databases. The contractor shall be responsible for modernization/enhancement, testing, and implementation of any approved modifications.

7.5.5.6 Software Releases

7.5.5.3.0 For the SGITA product, OGD will require regular periodic software releases to address fixes, O&M, and enhancements to various modules or the overall system in order to address OGD's evolving priorities and resource constraints. The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the modernization/enhancement of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

7.5.5.3.1 The contractor shall participate in OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grants user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

7.5.5.3.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and modernization/enhancements. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

7.5.5.3.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

7.5.5.3.4 The contractor shall be responsible for the configuration of COTS products that support all developed software.

7.5.5.3.5 The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a modernization/enhancement and deployment schedule will be determined during periodic meetings with the OGD IT team. The contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government-wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to CADS.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

7.5.5.3.6 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

7.5.5.4 Datamart Cleanup and Development

7.5.5.4.0 The contractor shall design modifications to SGITA in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in SGITA as required by EPA. The

contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

7.5.5.4.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

7.5.5.7 System Training Support

7.5.5.4.0 As SGITA evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

7.5.5.4.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

7.5.5.4.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

7.5.5.4.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

7.5.5.4.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 7.5.5 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
2. General Release Notes	Due no later than (NTL) three (3) days after release date	
3. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as

		online help (software) and system documentation three (3) days before release
4. Security Release Notes	Due no later than (NTL) three (3) days after release date	
5. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
6. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
7. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
8. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
9. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
10. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software modernization/enhancement, deployment files and instructions necessary for deployment.
11. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity,

		accuracy and completeness of the documents.
12. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
13. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	
14. Weekly Ticket Activity Report	Due no later than (NTL) first three (3) days of each week.	Weekly ticket report shall include, but not be limited to: Ticket number, description, category, priority, open date/time, close date/time, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
15. Monthly Ticket Summary Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket summary report shall include, but not be limited to: Ticket totals by category, priority, ticket duration, user name, user region, user department, user office/location, user phone number, technician name, and ticket status.
16. Monthly Ticket Trend Report	Due no later than (NTL) first three (3) days of each month.	Monthly ticket trend report shall include, but not be limited to month by month summary of: Ticket categories; priorities; regions, issues, users, and technicians; and average ticket durations by category, priorities, regions, technicians, and issues.

Task #6 - Capital Planning and Investment Control Support

1.0 The contractor shall support the capital planning and investment control process for Government-specified investments. This includes

assistance with the preparation, revision, and submission of OMB-required investment exhibits using EPA's CPIC Major, Medium, and Lite processes. The contractor will follow OMB and Agency capital planning requirements to ensure that Agency specified exhibits receive passing scores in all areas.

2.0 All CPIC exhibits for the different capital investments will be completed by the contractor in the Agency's eCPIC system.

Task 6 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. CPIC Exhibits	Due dates for exhibits are based on EI Office CPIC schedule for a fiscal year.	The contractor shall provide the necessary CPIC materials for OGD review that follow Office of Management & Budget (OMB) and EI Offices guidance and directives.

OPTIONAL TASKS:

Optional Task 9 (CLIN 5) may be exercised for the Base and Option Years 1 – 4, and Optional Tasks 7, 8, and 10 (CLINs 6, 7, and 8 respectively) may be exercised for Option Years 1-4 by the CO, at the discretion of the Government, and in accordance with Federal Acquisition Regulation (FAR) 52.217-6 Option for Increased Quantity and/or FAR 52.217-7 Option for Increased Quantity-Separately Price Line Item. Optional tasks and subtasks are specific to each period of performance and do not carry forward into the next 12-month period of performance. Optional Tasks 7, 9, and 10 contain subtasks while Optional Task 8 does not. The CO may exercise specific subtasks contained in Optional Tasks 7, 9, and 10 at the discretion of the Government.

OPTIONAL Task #7 - IGMS Legacy Modernization/Enhancement, Operations and Maintenance, Software Releases, and Support (Option Year 1-4)

If Optional Task #7 is exercised by CO , the contractor shall conduct activities as described in Task #2 Sections 7.3.0 – 7.3.7.

OPTIONAL Task #8 – Technology and Shared Service Assessment and Evaluation (Option Year 1-4)

1.0 The contractor shall assist, as required by the Government, evaluation of technologies that offer potential benefits to EPA and are compliant with EPA's Technical Reference Model. Upon request from the Government, the contractor shall provide comprehensive research and feasibility studies on promising technologies. This may include but is not limited to the following: analytical capabilities, infrastructure innovation, data innovation, and other strategic innovations, as required by the Government. The contractor shall perform such activities, including, but not limited to: researching technology trends and forecasts, exploring beneficial areas where the technology could be integrated, developing best practices for the utilization of the technology, demonstrating the capability of the technology to meet EPA's requirements using prototypes and pilots, and conducting and reporting to EPA analysis of the feasibility and cost-benefit of various federally available technology offerings.

2.0 In addition, EPA also embraces OMB's IT Shared Service Strategy for identifying potential opportunities for systems consolidation to a shared service provider. In order to achieve these objectives, business analysis expertise and support is required, as directed by OGD, in a full range of activities including, but not limited to: investigating business systems, examining organization structure, mapping existing requirements to the functionality in the share service solution, and conducting and reporting to EPA analysis of the feasibility and cost-benefit of various federally available Shared Service offerings. The proposed approaches chosen by the contractor and agreed to by EPA to address required and optional system engineering requirements shall be appropriate to the complexity, size and duration of the effort and shall be conducted in accordance with the appropriate Capability Maturity Model (CMM) requirements depending on the nature of the application.

OPTIONAL Task #9 – Grants Transformation Support

8.0 Project Management

8.0.1 Since planning is critical to a successful deployment of the application(s), the contractor shall assist, as instructed by the Government, in a variety of planning activities, including the management of project integration, scope, schedule, costs, quality, communications, and risks. The contractor shall support EPA in developing agreed upon

deliverables for project milestones and establish criteria related to schedule compliance and quality of deliverables in order to evaluate performance. As part of this task, the contractor shall work closely with EPA on developing all the project plans required to create a project baseline, including project and quality management plans. The contractor shall provide a quality control plan detailing contractor methodologies employed to conduct quality service oversight and delivery through the contract performance period. In addition, the contractor shall also support or be assigned responsibility by the Government for defining scope, creating Work Breakdown Structures (WBS), establishing and participating in an Integrated Project Team (IPT) and project business requirements and software development and/or modernization/enhancement workgroups, identifying and analyzing business and system requirements and risks, as well as developing project schedules, detailed cost estimates, and quality control metrics and checklists.

8.0.2 The contractor shall assist EPA, as directed, in tracking and managing the project schedule, monitoring and managing project risks, tracking and providing routine project performance and status reporting (on weekly and monthly basis), updating and maintaining high-level project status dashboards, and maintaining quality assurance on deliverables. This includes assisting the Government in the oversight of software engineering activities to minimize future schedule and cost overrun risks associated with deploying an operational system to EPA. In addition to directing and managing the execution of the project, the contractor shall assist EPA, as directed, in performing quality reviews, managing change requests, facilitating/participating in regular status meetings, communicating project information, and managing stakeholder expectations.

8.0.3 The contractor shall lead scheduled weekly development and/or modernization/enhancement working session and weekly operations and maintenance meetings as well as participate in ad hoc meetings when the COR provides the contractor with a written request. For ad hoc meetings, the COR will consult with the contractor; however, the COR will be the individual who schedules and coordinates the meeting agendas for ad hoc meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone, and during meetings when the COR provides the contractor with a written request. The COR and/or the ACOR may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this PWS, the Program or Project Manager, and the manager for any of the contractor's subcontractors that are working on any part of this PWS, shall first ask the COR whether the

meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense. No travel expense shall be authorized without prior government approval.

8.3 The contractor shall apply current industrial software development best practices that include iterative and incremental project management techniques including the agile software development lifecycle. Software development and/or modernization/enhancement within this project is to follow a minimum viable product (MVP)/Agile development methodology; whereby, the contractor works with EPA to identify and prioritize the 'must have' critical business requirements and gaps and incrementally deliver quality software work packages (via development sprints). The MVP, which emerges out of user testing, must fall within the scope of the task descriptions within this PWS. The contractor shall facilitate weekly software development/business and system requirements working session meetings with EPA COR and subject matter experts, groom and maintain the software development backlog, collaborate with EPA to analyze and prioritize work as approved by EPA COR, and provide high-level development progress reporting within weekly and monthly status reports. The contractor shall lead the contractor developer team, EPA subject matter experts, and key stakeholders to facilitate sprint planning, backlog refinement, sprint reviews, and sprint retrospective meetings.

8.4 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include, but is not limited to:

8.0.4.0 Providing a method/system/process for gathering and review of incoming requirements.

8.0.4.1 Providing analysis and feedback about feasibility of incoming requirements, as needed by OGD.

8.0.4.2 Providing line of sight tracking of approved requirements to deliverables.

8.1 Software Engineering and System/Business Analysis Services

8.1.0 In order for OGD to improve its business processes through standardizing and streamlining and to consolidate its IT infrastructure and management, software engineering expertise and services are needed to

develop and maintain new website(s), application(s), database(s), and system interface(s) that are required to meet these objectives. The contractor shall use proven industry standards and best practices in its software engineering activities. During this task, the contractor is also required to comply with Section 508, as well as Federal government and EPA standards for software design and development. All deliverables produced by the contractor are subject to quality reviews or audits either by EPA or by a contractor selected by EPA. The contractor shall be responsible for addressing assigned action items from quality findings within a timeframe agreed upon by both the contractor and OGD.

8.1.1 The contractor shall assist, as determined by OGD, in evaluating technologies that offer potential benefits to the Grants and Debarment program and are compliant with EPA's Technical Reference Model. Upon request from OGD, the contractor shall provide comprehensive research and feasibility studies on promising technologies. This may require the contractor to perform, but not limited to, such activities as researching technology trends and forecasts, exploring beneficial areas where the technology could be integrated, developing best practices for the utilization of the technology, and demonstrating the capability of the technology to meet OGD requirements using prototypes and pilots.

8.1.2 OGD shall require the contractor to prepare a Software Development Plan (SwDP) for OGD's approval that presents the contractor's approach to fulfilling the requirements in this task order. The SwDP shall encompass, but not be limited to: the software development method/approach to be used, the recommended tools for software development, the process and tools for software configuration management, naming conventions and standards to be employed, initial architecture modeling, and the approach for software quality assurance. The EPA does not require a specific configuration management tool; however, the tool must be prior approved by EPA management and be approved for use within the EPA network environment. The contractor shall provide the SwDP to OGD for review and approval before proceeding with software development and/or modernization/enhancement activities.

8.1.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software

Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

8.1.4 Since quality is a major factor of the grants business transformation and the IT systems consolidation initiative, the contractor shall be responsible for developing requirements that are complete, accurate, feasible, unambiguous, verifiable, and traceable.

8.1.5 The contractor shall provide technical support for any custom application developed.

8.2 Software Releases

8.2.0 The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the development of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency, unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

8.2.1 The contractor shall participate in the OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grants user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

8.2.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to: unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the

contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

8.2.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

8.2.4 The contractor shall be responsible for the configuration of COTS products that support all developed software.

8.2.5 The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team identifies and provides the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a development and/or modernization/enhancement and deployment schedule will be determined during periodic meetings and the contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government-wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impacts to grants transformation projects.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

8.2.6 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

8.3 System Training Support

8.3.0 As OGD multiple systems (including, but not limited to: IGMS Legacy, IGMS/NGGS, SGITA, EGRS/ERIA, CFDA, Comply, and/or CADS) evolve and mature, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

8.3.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

8.3.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

8.3.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

8.3.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

8.4 IGMS/NGGS Modernization/Enhancement – OPTIONAL SUB-TASK - Optional task requirements will be provided to contractor and exercised by the CO through contract modification, if necessary, following completed IGMS/NGGS application modernization/enhancement during contract base year and launch during option year 1.

8.5 Information Assurance (IA) Development and/or Modernization/Enhancement - OPTIONAL SUB-TASK - Optional task requirements will be provided to contractor and exercised by the CO through contract modification, if necessary, following completed

IGMS/NGGS application modernization/enhancement during contract base year and launch during option year 1.

8.6 CADS Move to Cloud - OPTIONAL SUB-TASK - Optional task requirements will be provided to contractor and exercised by the CO through contract modification, if necessary, following completed IGMS/NGGS application modernization/enhancement during contract base year and launch during option year 1.

8.7 Comply Enhancements - OPTIONAL SUB-TASK - Optional task requirements will be provided to contractor and exercised by the CO through contract modification, if necessary, following completed IGMS/NGGS application modernization/enhancement during contract base year and launch during option year 1.

Task 9 Deliverables and Due Dates

Name	**Due (if applicable)**	**Acceptance Criteria**
1. Draft SwDP	Due date to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
2. Final SwDP	Due date to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
3. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help

		(software) and system documentation three (3) days before release.
4. General Release Notes	Due no later than (NTL) three (3) days after release date	
5. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release
6. Security Release Notes	Due no later than (NTL) three (3) days after release date	
7. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
8. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
9. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
10. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.

11. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.
12. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment.
13. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.

OPTIONAL Task # 10 – G-Invoicing (Option Periods 1 – 4)

9.0 Project Management

9.0.1 Since planning is critical to a successful deployment of the application(s), the contractor shall assist, as instructed by the Government, in a variety of planning activities, including the management of project integration, scope, schedule, costs, quality, communications, and risks. The contractor shall support EPA in developing agreed upon deliverables for project milestones and establish criteria related to schedule compliance and quality of deliverables in order to evaluate performance. As part of this task, the contractor shall work closely with EPA on developing all the project plans required to create a project baseline, including project and quality management plans. The contractor shall provide a quality control plan detailing contractor methodologies employed to conduct quality service oversight and delivery through the contract performance period. In addition, the contractor shall also support or be assigned responsibility by the Government for defining scope, creating Work Breakdown Structures (WBS), establishing and participating in an Integrated Project Team (IPT) and project business requirements and software development and/or modernization/enhancement workgroups, identifying and analyzing business and system requirements and risks, as well as developing project schedules, detailed cost estimates, and quality control metrics and checklists.

9.0.2 The contractor shall assist EPA, as directed, in tracking and

managing the project schedule, monitoring and managing project risks, tracking and providing routine project performance and status reporting (on weekly and monthly basis), updating and maintaining high-level project status dashboards, and maintaining quality assurance on deliverables. This includes assisting the Government in the oversight of software engineering activities to minimize future schedule and cost overrun risks associated with deploying an operational system to EPA. In addition to directing and managing the execution of the project, the contractor shall assist EPA, as directed, in performing quality reviews, managing change requests, facilitating/participating in regular status meetings, communicating project information, and managing stakeholder expectations.

9.0.3 The contractor shall lead scheduled weekly development and/or modernization/enhancement working session and weekly operations and maintenance meetings as well as participate in ad hoc meetings when the COR provides the contractor with a written request. For ad hoc meetings, the COR will consult with the contractor; however, the COR will be the individual who schedules and coordinates the meeting agendas for ad hoc meetings. In addition, the contractor shall be available to answer questions via e-mail, by telephone, and during meetings when the COR provides the contractor with a written request. The COR and/or the ACOR may require knowledgeable members of the contractor's project team to attend meetings to respond to questions as well. For all meetings between the contractor and EPA on this PWS, the Program or Project Manager, and the manager for any of the contractor's subcontractors that are working on any part of this PWS, shall first ask the COR whether the meeting will take place as a conference call or in person prior to any contractor or subcontractor personnel incurring any local travel expense. No travel expense shall be authorized without prior government approval.

9.0.4 The contractor shall apply current industrial software development best practices that include iterative and incremental project management techniques including the agile software development lifecycle. Software development and/or modernization/enhancement within this project is to follow a minimum viable product (MVP)/Agile development methodology; whereby, the contractor works with EPA to identify and prioritize the ‘must have’ critical business requirements and gaps and incrementally deliver quality software work packages (via development sprints). The MVP, which emerges out of user testing, must fall within the scope of the task descriptions within this PWS. The contractor shall facilitate weekly software development/business and system requirements working session meetings with EPA COR and subject matter experts, groom and maintain the software development backlog, collaborate with EPA to analyze and

prioritize development work as approved by EPA COR, and provide high-level development progress reporting within weekly and monthly status reports. The contractor shall lead the contractor developer team, EPA subject matter experts, and key stakeholders to facilitate sprint planning, backlog refinement, sprint reviews, and sprint retrospective meetings.

9.0.5 The contractor shall help facilitate and assist in the change control management/processes of OGD systems, as directed by OGD. This could include, but is not limited to:

9.0.5.0 Providing a method/system/process for gathering and review of incoming requirements.

9.0.5.1 Providing analysis and feedback about feasibility of incoming requirements, as needed by OGD.

9.0.5.2 Providing line of sight tracking of approved requirements to deliverables.

9.0.5.3 The contractor shall design, develop, and test the necessary custom applications/interfaces. This will allow EPA to align to G-Invoicing, thereby, allowing EPA to fully process all orders, performance, remittance, and closure through G-Invoicing while still maintaining the required internal controls.

9.0.5.4The contractor shall assist in the design and implementation of data conversion/migration plans and scripts required to migrate all pre-existing and active IAs from the IGMS IA module to G-Invoicing or to an Agency-approved archive repository.

9.0.5.5The contractor shall assist in the retirement and decommission of the IGMS IA module in Lotus Notes after the alignment to G-Invoicing is complete.

9.0.5.6The contractor shall develop training materials and conduct training for the user community on any new custom applications/interfaces developed to assist in the Agency's alignment to the G-invoicing platform.

9.0.5.7The contractor shall assist in conducting user-acceptance testing of applications/interfaces and in end-to- end testing required to ensure the fluidity and Agency acceptance of the G-invoicing process.

9.0.5.8The contractor shall provide technical support for any developed custom application.

9.0.5.9The contractor shall assist, as determined by OGD, evaluation of technologies that offer potential benefits to the Grants and Debarment program and are compliant with EPA's Technical Reference Model. Upon request from OGD, the contractor shall provide comprehensive research and feasibility studies on promising technologies. This may require the contractor to perform such activities including, but not limited to: researching technology trends and forecasts, exploring beneficial areas where the technology could be integrated, developing best practices for the utilization of the technology, and demonstrating the capability of the technology to meet OGD requirements using prototypes and pilots.

9.0.5.10OGD shall require the contractor to prepare a Software Development Plan (SwDP) for OGD's approval that presents the contractor's approach to fulfilling the requirements in this task order. The SwDP shall encompass, such activities including, but not limited to: the software development method/approach to be used, the recommended tools for software development, the process and tools for software configuration management, naming conventions and standards to be employed, initial architecture modeling, and the approach for software quality assurance. The contractor shall provide the SwDP to OGD for review and approval before proceeding with software development and/or modernization/enhancement activities.

9.0.5.11Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

9.0.5.12Since quality is a major factor of the grants business transformation and the IT systems consolidation initiative, the contractor shall be responsible for developing requirements that are complete, accurate, feasible, unambiguous, verifiable, and traceable.

9.0.5.13The contractor shall provide technical support for any developed custom application.

9.1 Software Releases

9.1.0 The contractor shall follow EI guidance and directives for employing the agile software development approach for designing, programming, and testing of software modules. All source code developed or updated to fulfill this requirement shall be the property of EPA. In addition, the development of all source code shall be on government furnished equipment, EPA infrastructure (development, staging, and production environments), and a source code management system designated by the Agency unless the contractor receives written approval from the Agency. All source code deliverables and source code build procedures must be documented and delivered to the Agency, allowing for EPA staff to build each release for deployment unless the contractor receives written approval form the Agency for an alternative arrangement.

9.1.1 The contractor shall participate in the OGD change control process for researching proposed change requests, providing evaluation material required for decision makers, and implementing and documenting EPA approved changes from the grants user community. Using industry best practices, the contractor shall assist in tracking change requests through the entire change control process.

9.1.2 The contractor shall create test plans and scenarios, as well as conduct the various types of tests, including but not limited to: unit, end-to-end, and performance testing. The contractor shall also assist in User Acceptance Testing (UAT) to ensure that this product behaves as expected for any approved requirements and development. Defects discovered during these testing activities shall be fixed and retested by the contractor in order to prove that the issue(s) is resolved and no additional negative impact(s) to these products are introduced.

9.1.3 Requirements tracking, which facilitates the backward and forward traceability of all requirements, shall be performed by the contractor during this task. The contractor shall use requirements traceability to confirm that all requirements have been accounted for within the Software Development Life Cycle (SDLC). This will ensure that the software product delivered satisfies the software modernization requirements agreed to by the contractor and EPA.

9.1.4 The contractor shall be responsible for the configuration of COTS products that support all developed software.

9.1.5 The actual number of OGD requests for software releases will be determined during the OGD IT planning process. The OGD team will identify and provide the contractor with approved requirements for each software release and the remaining work that the contractor shall perform for each applicable fix/modification. Based on an evaluation of the priorities and requirements, a development and/or modernization/enhancement and deployment schedule will be determined during periodic meetings and the contractor shall develop enhancements for each release according to the approved requirements. Releases shall be consistent with EPA and government wide standards and policies. Furthermore, releases shall be tested for 508 compliance and reviewed for security concerns and impact to grants transformation projects.

General Releases – this is defined as a release that may impact several modules to address multiple issues.

Security Releases – EPA may also need to evaluate whether additional security enhancements will be required.

Agile Documentation – Electronic/ web accessible for tracking purposes.

9.1.6 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division); and Applicable Federal Information Processing Standards (FIPS) standards.

9.2 Datamart Cleanup and Development

9.2.0 The contractor shall design modifications to G-Invoicing in support of data extractions activities as well as cleanup of existing data. The Government estimates that the contractor shall be required to do no more than four (4) minor releases. The COR, or the ACOR in the COR's absence, will define any modifications required and will provide them to the contractor in written technical direction. The contractor shall provide data cleanup services for data in G-Invoicing as required by EPA. The contractor shall also provide consultation services, as required by EPA, with respect to the movement of grants, fellowship, and IA data into an Oracle environment.

9.2.1 The contractor shall follow the standard EPA Systems Design and Development Guidance (issued by EPA's National Technology Services Division) and Applicable FIPS standards.

9.3 System Training Support

9.3.0 As G-Invoicing evolves and matures, training may need to be provided to users in order for them to best utilize any implemented system changes. This task is to acquire contractor support to provide on-site and/or online training.

9.3.1 The contractor shall support, as directed by OGD, establishment of different learning paths for different users in order for various user groups to achieve specific learning objectives. This includes, but is not limited to: identifying training needs, developing the appropriate curriculum (training materials and online courseware), and conducting on-site training for customers of OGD IT systems.

9.3.2 All courseware and delivery methods developed under this task shall be compliant with EPA training and security policies.

9.3.3 Online training is becoming the mainstay of the Agency's delivery of training. As part of this training task, as directed by OGD, the contractor shall be responsible for developing courseware for online training via standard EPA support methods and tools. EPA currently provides online training tools (covering many topics) to all EPA employees 24 hours a day, 7 days a week. In order to maintain the quality of the training experience, this courseware shall include, but not be limited to: developing course content, graphical/interactive design and quizzes, and updating of the materials, as required.

9.3.4 The contractor, as directed by OGD, shall develop and maintain training materials and online/contextual help systems including, but not limited to: user and system administration manuals that provide step-by-step instructions, quick start and reference guides for users, and Frequently Asked Questions (FAQs) documentation.

Task 10 Deliverables and Due Dates

Name	Due (if applicable)	Acceptance Criteria
1. Draft SwDP	Due date to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
2. Final SwDP	Due date to be determined jointly by OGD and contractor	Documents shall be written in clear, understandable English that is devoid of grammatical, spelling and cut & paste errors. Documents shall be delivered on time.
3. General Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
4. General Release Notes	Due no later than (NTL) three (3) days after release date.	Documentation will be provided as online help (software) and system documentation three (3) days after release.

5. Security Release Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. The contractor shall provide template(s) (loading the template(s) into the IGMS Template Database on the EPAP2000 server) for each release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release
6. Security Release Notes	Due no later than (NTL) three (3) days after release date.	
7. Agile - Product Backlog	Beginning of each sprint	At a minimum, the contractor shall provide this information in electronic / web accessible format (e.g. JIRA, Trello, etc.) for members of the EPA's grants community to review for completeness.
8. Agile - Design Deliverables	End of every applicable sprint	The design deliverables must reflect the requirements provided by EPA Subject Matter Experts (SME).
9. Agile - Development Prototypes	End of second sprint, and every sprint	Accessible on EPA's staging server / development server for the user community to evaluate when applicable.
10. Agile - Reports	One business day after each sprint	The contractor shall provide sprint performance metrics reporting when requested by EPA.
11. Agile - Code Repository of Product - Version Controlled	End of call order	The contractor shall upload all source code that comprises a product into EPA's version-controlled open source code repository. Repository will be examined by EPA periodically for completeness.

12. Datamart Template	Due no later than (NTL) three (3) days before release date.	All delivered functions shall meet requirements and be delivered three (3) days before release. If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents. Documentation will be provided as online help (software) and system documentation three (3) days before release.
13. Datamart Release Notes	Due no later than (NTL) three (3) days after release date.	
14. Online Training Materials	Due as mutually negotiated with contractor	The contractor shall provide the necessary software development, deployment files and instructions necessary for deployment.
15. Training Materials	Due as mutually negotiated with contractor	If deliverable includes documents, such as user guides, manuals, deployment instructions, or other documentation, the contractor will follow a standard format and ensure high quality, organization, clarity, accuracy and completeness of the documents.

2.0 Methodology for Work Tasks

8.0.1 All work performed by the contractor must adhere to the policies and guidance in the following federal laws, regulations, publications, and manuals

- EPA Information Security – National Rules of Behavior, August 2019.
- EPA Enterprise Architecture Governance Procedures, 21 December 2017.
- EPA Capital Planning and Investment Control Program Policy for the Management of Information Technology Investments, 21 December 2017.
- EPA Enterprise Information Management Policy (EIMP), August 2019.
- EPA Information Security Policy, August 2019.

- EPA System Life Cycle Management (SLCM) Requirements Guidance, 21 December 2017.
- National Institute of Standards and Technology (NIST) Special Publication 800-88, *Guidelines for Media Sanitization Revision 1, Appendix G.*
- National Institute of Standard and Technology (NIST) Special Publication (SP) 800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*
- FIPS Publication 200, *Minimum Security Requirements for Federal Information and Information Systems*
- NIST SP 800-171, *Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations*
- Federal Information Security Modernization Act (FISMA) 44 USC Section 3541
- NTSD Operational Policies Manual.
- Content Standard for Digital Geospatial Metadata Version 2 (FGDC, June 1998).
- A Strategy for the National Spatial Data Infrastructure (FGDC, April 1997).
- Geographic Information for the 21st Century: Building a Strategy for the Nation (National Academy of Public Administration, January 1996).
- EPA Geospatial Blueprint, September 2010.
- Coordination of Surveying, Mapping, and Related Spatial Data Activities, (OMB Circular A16, October 1990).
- Management of Federal Information Resources, (OMB Circular A130).
- Guidelines for Implementing the National Geospatial Data Clearinghouse Version 1.0, ((FGDC, June 1994).
- Environmental Data Standards Council (EDSC) Latitude/Longitude Data Standard, EX000017-2, 6 January 2006.
- Executive Order 12906: Coordinating Geographic Data Acquisition and Access - The National Spatial Data Infrastructure (NSDI). (The White House, April 11, 1994).

8.0.2 Data Elements that exist or will be developed within the modernized IGMS/NGGS system may be required to conform to the below laws, acts, circulars, programs, forms, Code of Federal Regulations (CFR) sections, and official federal public websites, including but not limited to:

(1) 2 CFR 1326.137;

(2) 2 CFR 170.100;

(3) 2 CFR 170.110;

(4) 2 CFR 170.115;

(5) 2 CFR 180.110;

(6) 2 CFR 180.135;

(7) 2 CFR 180.155;

(8) 2 CFR 180.300-530;

(9) 2 CFR 180.315;

(10) 2 CFR 180.420;

(11) 2 CFR 180.425;

(12) 2 CFR 180.430;

(14) 2 CFR 182.225;

(15) 2 CFR 200.10;

(16) 2 CFR 200.11;

(17) 2 CFR 200.18;

(18) 2 CFR 200.201;

(19) 2 CFR 200.202;

(20) 2 CFR 200.203;

(21) 2 CFR 200.204;

(22) 2 CFR 200.205;

(23) 2 CFR 200.206;

(24) 2 CFR 200.207;

(25) 2 CFR 200.208;

(26) 2 CFR 200.209;

(29) 2 CFR 200.212;

(31) 2 CFR 200.3;

(32) 2 CFR 200.301;

(33) 2 CFR 200.302;

(34) 2 CFR 200.303;

(35) 2 CFR 200.304;

(36) 2 CFR 200.305;

(38) 2 CFR 200.306;

(39) 2 CFR 200.308;

(40) 2 CFR 200.310;

(41) 2 CFR 200.311;

(42) 2 CFR 200.312;

(43) 2 CFR 200.313;

(45) 2 CFR 200.315;

(48) 2 CFR 200.320;

(52) 2 CFR 200.324;

(54) 2 CFR 200.326;

(55) 2 CFR 200.327;

(56) 2 CFR 200.328;

(57) 2 CFR 200.329;

(62) 2 CFR 200.338;

(63) 2 CFR 200.339;

(65) 2 CFR 200.340;

(66) 2 CFR 200.341;

(67) 2 CFR 200.342;

(68) 2 CFR 200.343;

(69) 2 CFR 200.344;

(70) 2 CFR 200.345;

(73) 2 CFR 200.407;

(75) 2 CFR 200.410;

(76) 2 CFR 200.411;

(78) 2 CFR 200.413;

(79) 2 CFR 200.414;

(80) 2 CFR 200.415;

(81) 2 CFR 200.416;

(84) 2 CFR 200.419;

(88) 2 CFR 200.434;

(91) 2 CFR 200.45;

(92) 2 CFR 200.450;

(94) 2 CFR 200.49;

(95) 2 CFR 200.50;

(96) 2 CFR 200.501;

(98) 2 CFR 200.511;

(99) 2 CFR 200.512;

(100) 2 CFR 200.513;

(101) 2 CFR 200.515;

(102) 2 CFR 200.516;

(103) 2 CFR 200.517;

(104) 2 CFR 200.521;

(112) 2 CFR 200.73;

(121) 2 CFR 2424.1110;

(122) 2 CFR 2424.1140;

(123) 2 CFR 2424.137;

(129) 2 CFR 2520.137;

(130) 2 CFR 376.137;

(134) 2 CFR Appendix I to Part 200;

(136) 2 CFR Appendix III;

(136) 2 CFR Appendices III to Part 200;

(137) 2 CFR Appendices IV to Part 200;

(138) 2 CFR Appendices V to Part 200;

(139) 2 CFR Appendices VI to Part 200;

(140) 2 CFR Appendices VII to Part 200;

(141) 2 CFR Appendices VIII to Part 200;

(142) 2 CFR Appendices IX to Part 200;

(143) 2 CFR Part 180;

(157) Executive Order 12549 – Debarment and Suspension;

(159) Federal Financial Accounting Technical Release 12, Accrual Estimates for Grant Programs;

(160) Federal Funding Accountability and Transparency Act of 2006 or Transparency Act—Public Law 109-282, as amended by section 6202(a) of Public Law 110-252 (31 United States Code, U.S.C. 6101);

(170) Public Law 95-224 Federal Grant and Cooperative Agreement Act;

(172) Standard Form (SF)-428 Tangible Property Report;

(177) SF-429 (9/2011) Real Property Status Report;

(178) SF-429-A General Reporting;

(179) SF-429-B Request to Acquire, Improve or Furnish;

(180) SF-429-C Disposition of Encumbrance Request;

(184) SF-425 - Revised 10/11/2011;

(187) Data Act Information Model Schema (DAIMS) D2 V2;

(188) 2 CFR 200.458;

(190) Common Data Element Repository (CDER);

(191) CFDA Data Dictionary;

(195) Grants.gov;

(196) Joint Financial Management Improvement Program (JFMIP) Grant Financial System Requirements, 2000, Grants Overview Process;

(197) SF-LLL (Rev. 7-97) Disclosure of Lobbying Activities;

(198) USASpending.gov Data Dictionary;

(199) SF-424;

(201) PERFORMANCE PROGRESS REPORT SF-PPR;

(202) PERFORMANCE PROGRESS REPORT Office of Management and Budget (OMB) Approval Number: Performance Measures SF-PPR-A;

(209) SF-424A;

(215) Application for Federal Domestic Assistance- Individual;

(217) R & R Subaward Budget Multi-Project 10 YR Sub-form;

(221) SF-SAC;

(222) Federal Audit Clearinghouse (FAC) Data Dictionary;

(223) 2 CFR 200.510;

(225) Research Performance Progress Report (RPPR);

(232) 2 CFR 200.519;

(236) OMB Circular No. A-11 (2016);

(238) 2 CFR 200.507;

(243) https://grants.nih.gov/grants/glossary.htm;

(244) 2 CFR 200.77;

(245) 2 CFR 200.331;

(246) Grants Management Advisory 2011-02;

(247) 2 CFR 180.625;

(248) Cost Accounting Standards Board Disclosure Statement (DS-2);

(251) 2 CFR 200.300 - 2 CFR 200.344;

(254) 2 CFR Appendix XI - Compliance Supplement;

(255) 2 CFR 200.503;

(256) 2 CFR 200.518;

(257) 2 CFR 200.502;

(258) OMB Circular No. A-50 Revised, Audit Follow-up, Sept. 29, 1982;

(259) 2 CFR 200, Appendix X;

8.0.3 These policies and guidance documents are generally available electronically via the Internet.

8.0.4 All work performed by the contractor shall be done at the contractor location with the exception of the following:

- Meetings scheduled at the EPA facility located at: 1200 Pennsylvania Ave, NW (Ronald Reagan Building), Washington, D.C. 20460.
- Ad hoc meetings at the above EPA location, as requested by OGD
- Installation of test and final versions of the software
- Special request for a meeting at an off-site location

8 Applicable Cybersecurity Tasks

Indicated below are the applicable cybersecurity tasks to include in IT requirements, per EPA Acquisition Guide (EPAAG) 39.1.2.

TASK	TITLE	APPLICABLE
A	Personally Identifiable Information Contract Closeout	☑
B	Contractor return of all EPA-Provided and EPA-Activity-Related Information	☑
C	Verified Secure Destruction of All EPA-Provided and EPA-Activity-Related Information	☑
D	Contractor Return of all EPA-Owned and Leased Computing and Information Storage Equipment	☑
E	Authority to Operate (ATO) Suspension or Revocation	☑
F	Security Monitoring and Alerting Requirements	
G	IT Security and Privacy Awareness Training	☑
H	Specialized Information Security Training for Staff with Significant Security Responsibilities	☑
I	Federal Reporting Requirements	☑
J	Protecting Sensitive Information	☑
K	Security Assessment and Authorization (SA&A)	
L	Contractor System Oversight/Compliance	☑
M	Contractor Access to EPA IT Systems	☑
N	Individual Notification for Personally Identifiable Information	
O	Credit Monitoring and Identity Protection	☑
P	Compliance with IT Security Policies	☑
Q	Secure Technical Implementation	☑

R	Internet Protocol Version 6 (IPv6)	
S	Cloud Service Computing	
T	Contract Performance Information and Testimony	☑
U	Rehabilitation Act Section 508 Standards	☑
V	Termination for Default - Failure to Report Information Security Incident	☑

TASK KEY:

Requirement Type	Required Tasks
IT Hardware	A,B,C,F,G,H,I,J,K,M,P,Q,R,T,U,V
IT Software	A,F,H,I,J,K,L,M,P,Q,R,T,U,V
Green IT	A,B,C,E,F,H,I,J,K,M,P,Q,R,U,V
IT Services	A,B,C,D,E,G,H,I,J,L,M,O,P,Q,T,U,V
Data Center Services	A,B,C,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,T,U,V
Cloud Computing	A,B,C,E,F,G,H,I,J,K,L,M,N,O,P,Q,R,S,T,U,V
Cyber Security Product and Services	A,B,E,F,G,H,I,J,K,L,M,O,P,Q,R,T,V

SECTION II

1. Compliance, Policy, Regulations, and Restrictions

GENERAL

The contractor shall submit all analyses, options, recommendations, reports, and training materials required under this contract in draft for critical review by the contracting officer or contracting officer's representative. The government will make all final regulatory, policy, and interpretive decisions resulting from contractor-provider technical support under this contract and make the final decision on all contractor-provided recommendations. The contractor shall not publish or otherwise release, distribute or disclose any work generated under this contract without obtaining EPA's express advance written approval. When submitting material or reports that contain recommendations, the contractor shall explain or rank policy or action alternatives; describe procedures used to arrive at recommendations; summarize the substance of deliberations; report any dissenting views; list sources relied upon; and detail the methods and considerations upon which the recommendations are based.

The contractor shall ensure that all contractor and subcontractor personnel wear prominently displayed identification badges at all times when performing tasks under this contract and when interacting with EPA officials, federal agencies, state, tribal, and local governments, business, industry, and the general public.

The badge shall contain the individual's name and the company's name and logo. The office space occupied by the contractor in any location that is also occupied by EPA employees shall be identified with appropriate signs that include the contractor's name. When participating in any event and/or discussion (e.g., answering the telephone, participating as a panel member or speaker), the contractor shall ensure that contractor staff verbally identify themselves as contractor personnel so that there is no possible appearance of being EPA officials.

Task A - Personally Identifiable Information Contract Closeout

(a) *Definition.* Personally Identifiable Information (PII) - as defined in OMB Memorandum M-07-16, *Safeguarding Against and Responding to the Breach of Personally Identifiable Information*, PII refers to sensitive information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual.

(b) *Certification of Sanitization of EPA-provided and EPA-Activity-Related Files and Information (including, but not limited to: all records, files, and metadata in electronic or hardcopy format).* As part of contract closeout, the contractor shall submit a *Certification of Sanitization of EPA-provided and EPA-Activity-Related Files and Information* to the Contracting Officer and the Contracting Officer's Representative (COR) following the template provided in Appendix G of National Institute of Standards and Technology (NIST) Special Publication 800-88, *Guidelines for Media Sanitization Revision 1*, which assesses risk associated with Personally Identifiable Information (PII) that was generated, maintained, transmitted, stored, or processed by the contractor. The Senior Agency Official for Privacy (SAOP) shall review the Certification and coordinate with the Contracting Officer and the COR.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task B - Contractor Return of all EPA-Provided and EPA-Activity-Related Information

(a) Within thirty (30) days of an EPA request, at a different time period approved by EPA, or after the end of the contract performance period, the contractor must return all originals of all EPA-provided and EPA-Activity-Related Information (including, but not limited to: all records, files, and metadata in electronic or hardcopy format) to EPA. The contractor must return originals obtained while conducting activities in accordance with the contract with EPA; or distributed for any purpose by the contractor to any other related organization and/or any other component or separate business entity; or received from the contractor by any other related organization and/or any other component or separate business entity contractors must return all originals so that they cannot be used for further business by contractor.

(b) Concurrent with the return of all originals as set forth in paragraph (a), the contractor must document to the EPA the return of all originals of all EPA-provided and EPA-Activity-Related Information (including, but not limited to: all records, files, and metadata in electronic or hardcopy format). The contractor must document originals obtained while conducting activities in accordance with the contract with EPA; or distributed for any purpose by the contractor to any other related organization and/or any other component or separate business entity; or received from the contractor by any other related organization and/or any other component or separate business entity.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task C - Verified Secure Destruction of All EPA-Provided and EPA-Activity-Related Information

(a) Within 60 days of the contract performance period end date, (or at a different time period approved by EPA), after the contract is suspended or terminated by EPA for any reason, or after EPA has accepted and approved the contractor's return of information, the contractor must execute secure destruction (either by the contractor or third-party firm approved in advance by EPA) of all existing

active and archived originals and/or copies of all EPA-provided and EPA-activity-related files and information (including but not limited to all records, files, and metadata in electronic or hardcopy format). This information includes, but is not limited to information: obtained by the contractor while conducting activities in accordance with the contract with EPA; distributed for any purpose by the contractor to any other related organization and/or any other component or separate business entity; or received from the contractor by any other related organization and/or any other component or separate business entity. Destruction Methods shall be by written procedures approved by EPA in advance.

(b) Within 75 days of the contract performance period end date or a time period approved by EPA, after the contract is suspended or terminated by EPA for any reason, and after EPA has accepted and approved the contractor's return of information, the contractor must document to the EPA the secure destruction of all existing active and archived originals and/or copies of all EPA-provided and EPA-activity-related files and information, (including, but not limited to: all records, files, and metadata in electronic or hardcopy format). This information includes, but is not limited to: information obtained by the contractor while conducting activities in accordance with the contract with EPA; distributed for any purpose by the contractor to any other related organization and/or any other component or separate business entity; or received from the contractor by any other related organization and/or any other component or separate business entity. Destruction Methods shall be by written procedures approved by EPA in advance.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task D - Contractor Return of all EPA-Owned and Leased Computing and Information Storage Equipment

(a) Within 60 days of the contract performance period end date (or a different time period approved by EPA), the contractor must return all EPA-owned and leased computing and information storage equipment to EPA.

(b) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task E - Authority to Operate (ATO) Suspension or Revocation

(a) *Definitions*.

(i) Authority to Operate (ATO) - Signed by the Agency chief information officer (CIO) or deputy CIO, ATOs are issued for all information systems that input, store, process, and/or output Government information. In order to be granted an ATO, all federal information systems must be compliant with National Institute of Standard and Technology (NIST) Special Publication (SP) 800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*, and FIPS Publication 200, *Minimum Security Requirements for Federal Information and Information Systems*. Contractors whose internal information systems will process Sensitive Information incidental to Agency product or service development must meet requirements for NIST SP 800-171, *Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations*, instead of NIST SP 800-53.

(ii) Information Security Incident - an occurrence that results in actual or potential jeopardy to the confidentiality, integrity, or availability of an information system or the information the system processes, stores or transmits, or that constitutes a violation or imminent threat of violation of security policies, security procedures, or acceptable use policies. The contractor must report all known Information Security Incidents if they involve Sensitive Information.

(iii) Sensitive Information - As defined in NIST SP 800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*, Sensitive Information is any information where the loss, misuse or unauthorized access to, or modification of, could adversely affect the national interest or the conduct of federal programs, or the privacy to which individuals are entitled under 5 U.S.C. Section 552a (the Privacy Act), but that has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept classified in the interest of national defense or foreign policy. Sensitive Information is subject to stricter handling requirements than non-sensitive information because of the increased risk if the data is compromised. Some categories of Sensitive Information include Financial, Medical or Health, Legal, Strategic and Business, Human Resources, Personally Identifiable Information (PII), and Sensitive PII. These categories of information require appropriate protection as stand-alone

information and may require additional protection in aggregate.

(b) In the event of an Information Security Incident, the Government may suspend or revoke an existing ATO (either in part or in whole). If an ATO is suspended or revoked in accordance with this requirement, the Contracting Officer may direct the contractor to take additional security measures to secure Sensitive Information. These measures may include restricting access to Sensitive Information on the contractor information technology (IT) system under this contract. Restricting access may include disconnecting the system processing, storing, or transmitting the Sensitive Information from the Internet or other networks or applying additional security controls.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task F - Security Monitoring and Alerting Requirements

(a) All contractor-operated systems that use or store EPA information must meet or exceed EPA policy requirements pertaining to security monitoring and alerting. All systems are subject to the requirements of existing federal law, policy, regulation and guidance (e.g., Federal Information Security Management Act of 2002). The contractor must comply with the EPA-used Department of Homeland Security (DHS) Continuous Diagnostics and Mitigation (CDM) policy for security monitoring and alerting, which includes requirements including, but not limited to:

(1) System and Network Visibility and Policy Enforcement at the following levels:

(i) Edge
(ii) Server / Host
(iii) Workstation / Laptop / Client
(iv) Network
(v) Application
(vi) Database

(vii) Storage
(viii) User

(2) Alerting and Monitoring

(3) System, User, and Data Segmentation

(b) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task G – EPA, IT Security, and Privacy Awareness Training

(a) The contractor must ensure that all contractor personnel complete EPA-provided annual mandatory training (user role-based, records management, etc.) and IT Security and Privacy Awareness training prior to gaining access to EPA information systems. EPA will provide notification and instructions to the contractor for completion of this mandatory user training. Non-compliance may result in denial of system access.

(b) The contractor must ensure that each contractor employee review and sign the *EPA Rules of Behavior* pertaining to appropriate use of EPA information systems prior to gaining access to EPA information systems. The contractor must also ensure that each contractor employee reviews and accomplishes *EPA Rules of Behavior* at least annually. EPA will provide notification to the contractor when these reviews are required.

(d) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task H - Specialized Information Security Training for Staff with Significant Security Responsibilities

(a) The contractor must ensure that contractor personnel with significant information security responsibilities complete specialized information security

training based on the requirements defined in the EPA role-based training program *(program information will be provided following Contract award)*. The objective of the information security role-based training is to develop an EPA information security workforce with a common understanding of the concepts, principles, and applications of information security to ensure the confidentiality, integrity, and availability of EPA's information and information systems. The contractor is required to report training completed to ensure competencies are addressed. The contractor must ensure employee training hours are satisfied in accordance with EPA Security and Privacy Training Standards *(information will be provided following Contract award)*. The Contracting Officer's Representative (COR) will provide additional information for specialized information security training based on the requirements in paragraph (b).

(b) The contractor must ensure that all IT and Information Security personnel receive the necessary technical (i.e. operating system, network, security management, and system administration) and security training and maintain certifications in order to carry out their duties.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task I - Federal Reporting Requirements

(a) Contractor operating information systems utilized on behalf of EPA must comply with Federal Information Security Modernization Act (FISMA) 44 USC Section 3541 reporting requirements. Annual and quarterly data collection will be coordinated by EPA. Contractors must provide EPA with the requested information based on the timeframes provided with each request. Contractor systems must comply with monthly data feed requirements as coordinated by EPA. Reporting requirements are determined by the Office of Management and Budget (OMB), and may change for each reporting period. The contractor will provide the EPA Contracting Officer's Representative (COR) all information to fully satisfy FISMA reporting requirements for contractor systems.

(b) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of

this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task J - Protecting Sensitive Information

(a) Definitions.

(1) Sensitive Information.

As defined in National Institute of Standards and Technology Special Publication (NIST SP) 800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*, Sensitive Information is any information where the loss, misuse or unauthorized access to, or modification of, could adversely affect the national interest or the conduct of federal programs, or the privacy to which individuals are entitled under 5 U.S.C. Section 552a (the Privacy Act), but that has not been specifically authorized under criteria established by an Executive Order or an Act of Congress to be kept classified in the interest of national defense or foreign policy. Sensitive Information is subject to stricter handling requirements than non-sensitive information because of the increased risk if the data are compromised. Some categories of Sensitive Information include Financial, Medical or Health, Legal, Strategic and Business, Human Resources, Personally Identifiable Information (PII), and Sensitive PII. These categories of information require appropriate protection as stand-alone information and may require additional protection in aggregate.

(2) Personally Identifiable Information (PII).

PII, as defined in OMB Memorandum M-07-16, *Safeguarding Against and Responding to the Breach of Personally Identifiable Information*, refers to sensitive information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. The definition of PII is not anchored to any single category of information or technology. Rather, it requires a case-by-case assessment made by the EPA Privacy Officer of the specific risk that an individual can be identified. Non-PII can become PII whenever additional information that is publicly available — in

any medium and from any source — is or can be combined to identify an individual. As an example, PII includes a name and an address because it uniquely identifies an individual, but alone may not constitute Sensitive PII.

(3) Sensitive PII.

Sensitive PII refers to personally identifiable information that can be used to target, harm, or coerce an individual or entity, assume or alter an individual's or entity's identity, or alter the outcome of an individual's or entity's activities. Sensitive PII requires stricter handling than PII because of the increased risk to an individual or associates if the information is compromised. Some categories of Sensitive PII include stand-alone information, such as Social Security numbers (SSN) or biometric identifiers. Other information such as a financial account, date of birth, maiden names, citizenship status, or medical information, in conjunction with the identity of an individual (directly or indirectly inferred), are also considered Sensitive PII. In addition, the context of the information may determine whether it is sensitive, such as a list of employees with poor performance ratings or a list of employees who have filed a grievance or complaint.

(b) Authorization to Use, Store, or Share Sensitive Information.

(1) Through the Contracting Officer, the contractor must obtain written approval by the Chief Information Officer (CIO) or designee prior to the use or storage of EPA Sensitive Information or sharing of EPA Sensitive Information by the contractor with any subcontractor, person, or entity other than the EPA.

(2) The contractor shall not remove Sensitive Information from approved location(s), electronic device(s), or other storage systems, without prior approval of the CIO or designee obtained through the Contracting Officer.

(c) Information Types. Sensitive Information includes PII, which in turn includes Sensitive PII. Therefore, all requirements for Sensitive Information apply to PII and Sensitive PII, and all requirements for PII apply to Sensitive PII.

(d) Information Security Incidents. An *Information Security Incident* is an

occurrence that results in actual or potential jeopardy to the confidentiality, integrity, or availability of an information system or the information the system processes, stores or transmits, or that constitutes a violation or imminent threat of violation of security policies, security procedures, or acceptable use policies. The contractor must report all known Information Security Incidents if they involve Sensitive Information.

(1) Information Security Reporting Requirements.

(i) The contractor must report all Information Security Incidents and Privacy Breaches in accordance with the requirements below, even if it is believed the Incident may be limited, small, or insignificant. An information security report shall not, by itself, be interpreted as evidence that the contractor has failed to provide adequate information security safeguards for Sensitive Information or has otherwise failed to meet contract requirements.

(ii) The contractor must report via email all Information Security Incidents and Privacy Breaches to the EPA Service Helpdesk immediately, but not later than 30 minutes, after becoming aware of the Incident. The contractor shall email the EPA Service Helpdesk at CSIRC@epa.gov, and shall also email the Contracting Officer and Contracting Officer Representative (COR). If the contractor fails to report in 30 minutes, specific Government remedies may include termination in accordance with EPA Requirement *Termination for Default – Failure to Report Information Security Incident*.

(iii) The types of information required in an Information Security Incident and Privacy Breach reports include: contractor name and point-of-contact (POC) information, contract number; the type, amount, and description of information compromised; and incident details such as location, date, method of compromise, and impact, if known.

(iv) The contractor shall not include any Sensitive Information in the subject or body of any e-mail. To transmit Sensitive Information, the contractor shall use Federal Information Processing Standards (FIPS) 140-2 compliant encryption modules to protect Sensitive Information in attachments to email.

(v) If applicable, the contractor must also provide supplemental information or reports related to a previously reported incident directly to the Contracting Officer, COR and EPA Service Helpdesk at CSIRC@epa.gov. The contractor shall include any related ticket numbers in the subject line of the email.

(2) Information Security Incident Response Requirements.

(i) All determinations related to Information Security Incidents and Privacy Breaches, including response activities, notifications to affected individuals and related services (e.g., credit monitoring and identity protection) will be made in writing by authorized EPA officials at EPA's discretion and communicated by the Contracting Officer.

(ii) The contractor must provide full access and cooperation for all activities determined by EPA to be required to ensure an effective Incident Response, including providing all requested images, log files, and event information to facilitate rapid resolution of Information Security Incidents. The contractor shall maintain the capabilities to: determine what sensitive information was or could have been accessed and by whom, construct a timeline of user activity, determine methods or techniques used to access the information, identify the initial attack vector, and remediate and restore the protection of information. The contractor is required to preserve all data, records, logs and other evidence that are reasonably necessary to conduct a thorough investigation of the Information Security Incident.

(iii) The contractor is responsible for performing Incident and Privacy Breach Response activities required by EPA, including but not limited to inspections, investigations, forensic reviews, data analyses and processing by EPA and EPA OIG personnel and others on behalf of EPA. As requested by the Contracting Officer, the contractor may provide technical support for the Government's final determinations of responsibility activities for the Incident and/or liability activities for any additional Incident Response activities (e.g., possible restitution calculation to affected individuals).

(iv) EPA, at its sole discretion, may obtain the assistance of Federal agencies and/or third-party firms to aid in Incident Response activities.

(v) The contractor is responsible for all costs and related resource allocations required for all subsequent Incident Response activities determined to be required by EPA.

(e) Contractor Plan for Protection of Sensitive Information. The contractor is responsible for the proper handling and protection of Sensitive Information to prevent unauthorized disclosure. Upon contract award, the contractor shall develop and maintain a documentation plan addressing the following minimum requirements regarding the protection and handling of Sensitive Information:

(1) Proper marking, control, storage, and handling of Sensitive Information residing on electronic media, including computers and removable media, and on paper documents.

(2) Proper control and storage of mobile technology, portable data storage devices, and communication devices.

(3) Proper use of Federal Information Processing Standards (FIPS) 140-2 compliant encryption modules to protect Sensitive Information while at rest and in transit throughout EPA, contractor, and/or subcontractor networks, and on host and client platforms.

(4) Proper use of FIPS 140-2 compliant encryption modules to protect Sensitive Information in email attachments, including policy that passwords must not be communicated in the same email as the attachment.

(5) Information Security Incidents. The contractor shall report to the Government any security incident involving Personally Identifiable Information (PII) of which it becomes aware.

(6) Contractor Access to EPA IT Systems. The contractor shall configure their network to support access to government systems (e.g., configure ports and protocols for access).

(a) Requirement for Business to Government (B2G) network connectivity. The contractor will connect to the B2G gateway via a contractor-procured Internet Service Provider (ISP) connection and assume all responsibilities for establishing and maintaining their connectivity to the B2G gateway. This will include acquiring and maintaining the circuit to the B2G gateway and acquiring a FIPS-140-2 Virtual Private Network (VPN)/Firewall device compatible with the Agency's VPN device. Maintenance and repair of contractor-procured VPN equipment shall be the responsibility of the contractor.

(b) Dial-Up ISP Connections are not acceptable.

(c) The contractor must comply with the Agency's Guidance regarding allowable ports, protocols, and risk mitigation strategies (e.g. File Transfer Protocol or Telnet).

(7) IT Security and Privacy Awareness Training. The contractor must ensure annual security education, training, and awareness programs are conducted

for their employees performing under the subject contract that addresses, at a minimum, physical security, acceptable use policies, malicious content and logic, and non-standard threats such as social engineering for their employees. The contractor must also ensure employees performing under the subject contract receive the Agency's initial and annual information security awareness training.

(8) The contractor must not conduct default installations of "out of the box" configurations of Commercially-Off-the-Shelf (COTS) purchased products. The contractor shall configure COTS products in accordance with EPA, NIST, Defense Information Systems Agency (DISA) Security Technical Implementation Guides (STIGs) or Center for Internet Security (CIS) standards. Standards are listed in order of precedence for use. If standards do not exist from one of these sources, the contractor shall coordinate with EPA to develop a configuration.

(f) *Subcontract flow down*. The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task K - Security Assessment and Authorization (SA&A)

(a) The contractor is required to undergo Security Assessment and Authorization (SA&A); i.e., the process by which a federal agency examines its information technology infrastructure and develops supporting evidence necessary for security assurance accreditation, prior to using information systems to access and/or store Government information, potentially including Sensitive Information. The contractor's facilities must also meet the security requirements for "moderate confidentiality impact" as defined by the Federal Information Processing Standards (FIPS) 199 publication *Standards for Security Categorization of Federal Information and Information Systems*.

(b) For all information systems that will input, store, process, and/or output Government information, the contractor shall obtain an Authorization to Operate (ATO) signed by the Chief Information Officer (CIO) from the Contracting Officer (working with the Contracting Officer's Representative (COR)) before using EPA information in the system. The contractor may be able to obtain an Authorization to Test from the SIO for the office obtaining services that will allow use of EPA information in certain circumstances to facilitate system development or implementation. Before a federal information system can be granted an ATO, it must be compliant with National Institute of Standard and Technology (NIST) SP

800-53, *Security and Privacy Controls for Federal Information Systems and Organizations*, and FIPS Publication 200, *Minimum Security Requirements for Federal Information and Information Systems*. Contractors whose internal information systems will process Sensitive Information incidental to Agency product or service development must meet requirements for NIST SP 800-171, *Protecting Controlled Unclassified Information in Nonfederal Information Systems and Organizations* (instead of NIST SP 800-53) in order to be granted an ATO.

(c) FIPS 199 moderate confidentiality impact must be utilized for contractor information technology (IT) systems and security control baseline requirements.

(d) Prior to Agency SA&A activities, the COR must complete a Privacy Threshold Analysis (PTA) for all IT systems. The COR must also provide the completed PTA to the EPA Privacy Officer for a determination of whether a Privacy Impact Assessment (PIA) is required. If a determination is made that a PIA is required, it will be completed by EPA in accordance with EPA PIA Template instructions.

(e) The contractor is responsible for preparing SA&A documentation with the use of EPA tools and security documentation templates including: System Security Plan, Security Assessment Report, Contingency Plan, and Incident Response Plan. The contractor must follow federally mandated SA&A and Risk Management Framework (RMF) processes throughout the IT system lifecycle process to ensure proper oversight by EPA. RMF modifies the traditional Certification and Accreditation process and integrates information security and risk management activities into the system development life cycle.

(f) The contractor must submit SA&A documentation as defined in paragraph (e) to the COR at least 60 days before the ATO expiration date.

(g) The contractor shall fix or mitigate system or security vulnerabilities within a time frame commensurate with the level of risk they present (as identified by the EPA and contractor):

- High Risk = 2 business days from vulnerability notification from contractor
- Moderate Risk = 7 business days from vulnerability notification from contractor
- Low Risk = 30 business days from vulnerability notification from contractor

(h) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task L - Contractor System Oversight/Compliance

(a) Pursuant to National Institute of Standards and Technology Special Publication (NIST SP) 800-53 Rev 4, the EPA and GAO have the authority to conduct site reviews for compliance validation and will conduct security reviews on a periodic and event-driven basis for the life of the contract. Full cooperation by the contractor is required for audits and forensics.

(b) The contractor shall provide EPA access to the contractor's facilities, installations, operations, documentation, databases, information technology (IT) systems and devices, and personnel used in performance of the contract, regardless of the location. The contractor shall provide access to the extent required, in EPA's judgment, to conduct an inspection, evaluation, investigation or audit, including vulnerability testing to safeguard against threats and hazards to the integrity, availability, and confidentiality of agency data or to the function of information technology systems operated on behalf of the agency, and to preserve evidence of information security incidents. This information shall be available to the EPA upon request.

(c) All contractor systems used in the performance of the contract must comply with Information Security Continuous Monitoring (ISCM) and Reporting as identified in OMB Memorandum M-14-03, *Enhancing the Security of Federal Information and Information Systems*. In addition, EPA reserves the right to perform ISCM and IT security scanning of contractor systems with tools and infrastructure of EPA's choosing.

(d) All contractor systems used in the performance of the contract must perform monthly vulnerability scanning as defined by EPA IT and Security Policy, and the contractor must provide scanning reports to the Contracting Officer, who will forward them to the EPA CIO or designee on a monthly basis.

(e) All contractor systems used in the performance of the contract must participate in the implementation of automated security controls testing mechanisms and provide automated test results in Security Compliant Automation Protocol (SCAP) compliant data to the Contracting Officer, who will forward to the EPA CIO or designee on a monthly basis.

(f) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task M - Contractor Access to EPA IT Systems

(a) Immediately following contract award, the contractor shall provide to the Contracting Officer's Representative (COR) a complete list of contractor employee names that require access to EPA information systems.

(b) The contractor shall provide a contractor employee change report by the fifth day of each month after contract award to the COR. The report shall contain the listing of all contractor employees who separated or were hired under the contract in the past 60 days. This report shall be submitted even if no separations or hires have occurred during this period. Failure to submit a contractor employee change report may, at the Government's discretion, result in the suspension of all network accounts associated with this contract. The format for this report will be provided by the COR.

(c) (1) The contractor shall require each of its employees who will need system access for six months or less to utilize a Personal Identity Verification-Interoperable (PIV-I) card or equivalent, as determined by EPA, in order to access EPA information technology (IT) systems and Sensitive Information. The contractor shall ensure that its employees will not share accounts to access EPA IT systems and Sensitive Information.

(2) The contractor shall require each of its employees who will need system access for more than six months to utilize an HSPD-12 compliant Personal Identity Verification (PIV) card, such as the EPA EPASS card, in order to access EPA IT systems and Sensitive Information. The contractor shall ensure that its employees complete a federal government-initiated background investigation as part of the PIV issuance process. The contractor shall ensure that its employees will not share accounts to access EPA IT systems and Sensitive Information.

(d) EPA, at its discretion, may suspend or terminate contractor access to any systems, information/data, and/or facilities when an Information Security Incident or other electronic access violation, use or misuse issue warrants such action. The suspension or termination shall last until EPA determines that the situation has been corrected or no longer exists. Upon request by EPA, the contractor shall immediately return all EPA information/data, as well as any media type that houses or stores Government information.

(e) The contractor shall notify the COR at least five days prior to a contractor employee being removed from a contract (notification shall be at least 15 days for key personnel in accordance with requirement 1552.237-72, *Key Personnel*). For unplanned terminations or removals of contractor employees from the contractor organization that occur with less than five-day notice, the

contractor shall notify the COR immediately. The contractor shall ensure that HSPD-12/PIV cards issued to a contractor's employee shall be returned to the COR prior to the employee's departure.

(f) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task N - Individual Notification for Personally Identifiable Information

(a) Definitions.

(1) *Information Security Incident* is an occurrence that results in actual or potential jeopardy to the confidentiality, integrity, or availability of an information system or the information the system processes, stores or transmits, or that constitutes a violation or imminent threat of violation of security policies, security procedures, or acceptable use policies.

(2) *Personally Identifiable Information (PII)*, as defined in OMB Memorandum M-07-16, *Safeguarding Against and Responding to the Breach of Personally Identifiable Information*, refers to sensitive information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. The definition of PII is not anchored to any single category of information or technology. Rather, it requires a case-by-case assessment made by the EPA Privacy Officer of the specific risk that an individual can be identified. Non-PII can become PII whenever additional information that is publicly available — in any medium and from any source — is or can be combined to identify an individual. As an example, PII includes a name and an address because it uniquely identifies an individual, but alone may not constitute Sensitive PII.

(3) *Sensitive PII* refers to personally identifiable information that can be used to target, harm, or coerce an individual or entity, assume or alter an individual's or entity's identity, or alter the outcome of an individual's or entity's activities. Sensitive PII requires stricter handling than PII because of the increased risk to an individual or associates if the information is compromised. Some categories of Sensitive PII include stand-alone information, such as Social Security numbers (SSN) or biometric identifiers. Other information such as a financial account, date of birth, maiden names, citizenship status, or medical information, in conjunction with the identity of an individual (directly or indirectly inferred), are also considered

Sensitive PII. In addition, the context of the information may determine whether it is sensitive, such as a list of employees with poor performance ratings or a list of employees who have filed a grievance or complaint.

(b) The contractor shall have in place procedures and the capability to notify any individual whose Personally Identifiable Information (PII) resided in the contractor information technology (IT) system at the time of an Information Security Incident not later than five business days after being directed by the Contracting Officer to notify individuals, unless otherwise approved by the Contracting Officer. The procedures must be approved by the EPA prior to use. The method and content of any notification by the contractor shall be coordinated with, and subject to prior written approval by, the Contracting Officer in consultation with authorized EPA officials at EPA's discretion. The contractor shall not proceed with notification unless the Contracting Officer has determined in writing that notification is appropriate.

(c) Subject to Government analysis of the incident and the terms of its instructions to the contractor regarding any resulting notification, the notification method may consist of letters to affected individuals sent by first class mail, electronic means, or general public notice, as approved by the Government. Notification may require the contractor's use of address verification and/or address location services. At a minimum, the notification shall include:

(1) A brief description of the incident;
(2) A description of the types of PII and Sensitive PII involved;
(3) A statement as to whether the PII or Sensitive PII was encrypted or protected by other means;
(4) Steps individuals may take to protect themselves;
(5) What the contractor and/or the Government are doing to investigate the incident, to mitigate the incident, and to protect against any future incidents; and
(6) Information identifying who individuals may contact for additional information, including contractor name, point of contact (POC), and contract number.

(d) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task O - Credit Monitoring and Identity Protection

(a) Definitions.

(1) *Information Security Incident* is an occurrence that results in actual or potential jeopardy to the confidentiality, integrity, or availability of an information system or the information the system processes, stores or transmits, or that constitutes a violation or imminent threat of violation of security policies, security procedures, or acceptable use policies.

(2) *Personally Identifiable Information (PII)*, as defined in OMB Memorandum M-07-16, *Safeguarding Against and Responding to the Breach of Personally Identifiable Information*, refers to sensitive information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. The definition of PII is not anchored to any single category of information or technology. Rather, it requires a case-by-case assessment made by the EPA Privacy Officer of the specific risk that an individual can be identified. Non-PII can become PII whenever additional information that is publicly available — in any medium and from any source — is or can be combined to identify an individual. As an example, PII includes a name and an address because it uniquely identifies an individual, but alone may not constitute Sensitive PII.

(3) *Sensitive PII* refers to personally identifiable information that can be used to target, harm, or coerce an individual or entity, assume or alter an individual's or entity's identity, or alter the outcome of an individual's or entity's activities. Sensitive PII requires stricter handling than PII because of the increased risk to an individual or associates if the information is compromised. Some categories of Sensitive PII include stand-alone information, such as Social Security numbers (SSN) or biometric identifiers. Other information such as a financial account, date of birth, maiden names, citizenship status, or medical information, in conjunction with the identity of an individual (directly or indirectly inferred), are also considered Sensitive PII. In addition, the context of the information may determine whether it is sensitive, such as a list of employees with poor performance ratings or a list of employees who have filed a grievance or complaint.

(b) *Credit Monitoring Requirements*. In the event that an Information Security Incident involves PII or Sensitive PII, the contractor may be required to do the following tasks as directed by the Contracting Officer:

(1) Provide notification to affected individuals as described in the "Individual Notification for Personally Identifiable Information" requirement;

(2) Provide credit monitoring and identity protection services to individuals whose data was under the control of the contractor or resided in the contractor information technology (IT) system at the time of the Information

Security Incident for a period beginning the date of the Incident and extending not less than 18 months from the date the individual is notified; and/or

(3) Use a dedicated call center; or establish one, if necessary and as authorized in writing by the Contracting Officer. Call center services provided by the contractor shall include:

(i) A dedicated telephone number for affected individuals to contact customer service within a fixed time period as determined by the Contracting Officer;

(ii) Information necessary for affected individuals to access credit reports and credit scores;

(iii) Weekly reports submitted to the Contracting Officer's Representative (COR) on call center volume, issue escalation (i.e., those calls that cannot be handled by call center staff and must be resolved by call center management or EPA, as appropriate), and other key metrics;

(iv) Escalation of calls that cannot be handled by call center staff to call center management or EPA for resolution, as appropriate;

(v) Preparation of customized frequently-asked-questions-and-answers (FAQs), in consultation as applicable with other parties like subject matter experts and CORs, and that must be approved in advance in writing by the Contracting Officer; and

(vi) Information for affected individuals to contact customer service representatives and fraud resolution representatives for credit monitoring and identity protection assistance.

(c) *Credit monitoring and identity protection services.* At a minimum, the contractor shall provide the following credit monitoring and identity protection services:

(1) Triple credit bureau monitoring with Equifax, Experian and Transunion;

(2) Daily customer service;

(3) Alerts provided to the individual for changes in credit posture and fraud; and/or

(4) Assistance to the individual with enrollment in the services and the use of fraud alerts.

(d) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the

Contracting Officer.

Task P - Compliance with IT Security Policies

(a) Information systems and system services provided to EPA by the contractor must comply with current EPA information technology (IT), IT security, physical and personnel security and privacy policies and guidance, and EPA Acquisition Regulation 1552.211-79, *Compliance with EPA Policies for Information Resources Management*.

(b) Contractors are also required to comply with current Federal regulations and guidance found in the Federal Information Security Modernization Act (FISMA) of 2014, Privacy Act of 1974, E-Government Act of 2002, Federal Information Processing Standards (FIPS), the 500- and SP500- and 800-Series Special Publications (SP), Office of Management and Budget (OMB) memoranda and other relevant Federal laws and regulations that are applicable to EPA.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task Q - Secure Technical Implementation

(a) The contractor shall use applications that are fully functional and operate correctly as intended on systems using the United States Government Configuration Baseline (USGCB).

(b) The contractor's standard installation, operation, maintenance, updates, and/or patching of software must not alter the configuration settings from the approved USGCB configuration.

(c) Contractor applications designed for normal/regular, i.e., non-privileged end users must run in the standard user context without elevated system administration privileges.

(d) The contractor shall apply due diligence at all times to ensure that Federal Information Processing Standard (FIPS) 199 "moderate confidentiality impact" security is always in place to protect EPA systems and information.

(e) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the

Contracting Officer.

Task R - Internet Protocol Version 6 (IPv6)

(a) In accordance with EPA technical standards, all system hardware, software, firmware, and/or networked component or service (voice, video, or data) utilized, developed, procured, acquired or delivered in support and/or performance of this contract shall be capable of transmitting, receiving, processing, forwarding, and/or storing digital information across system boundaries utilizing system packets that are formatted in accordance with commercial standards of Internet Protocol version 6 (IPv6) as set forth in the USGv6 Profile (NIST Special Publication 500-267) and corresponding declarations of conformance defined in the USGv6 Test Program. In addition, devices and systems shall maintain interoperability with IPv4 products.

(b) Any IP product or system utilized, developed, acquired, produced, or delivered must interoperate with both IPv6 and IPv4 systems and products, in an equivalent or better way than current IPv4 capabilities with regard to functionality, performance, management, and security; and have available contractor/vendor IPv6 technical support for development, implementation, and fielded product management.

(c) As IPv6 evolves, the contractor shall upgrade or provide an appropriate migration path for each item developed, delivered or utilized, at no additional cost to the Government. The contractor shall retrofit all non-IPv6 capable equipment, as defined above, which is fielded under this contract with IPv6 capable equipment, at no additional cost to the Government.

(d) The contractor shall provide technical support for both IPv4 and IPv6.

(e) All contractor-provided system or software must be able to operate on networks supporting IPv4, IPv6, or one supporting both.

(f) Any product whose non-compliance is discovered and made known to the contractor within one year after acceptance shall be upgraded, modified, or replaced to bring it into compliance, at no additional cost to the Government.

(g) EPA reserves the right to require the contractor's products to be tested within an EPA or third-party test facility to demonstrate contract compliance.

(h) In accordance with FAR 11.002(g), this acquisition must comply with the National Institute of Standards and Technology (NIST) US Government (USG) v6 Profile and IPv6 Test Program. The contractor shall fund and provide resources

necessary to support these testing requirements, and it will not be paid for as a direct cost under the subject contract.

(i) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task S - Cloud Service Computing

(a) The contractor handling EPA information or operating information systems on behalf of EPA must protect EPA information and information systems against unauthorized access, use, disclosure, disruption, modification, or destruction per the Federal Information Security Modernization Act (FISMA) and EPA policy.

(b) EPA information stored in a cloud environment remains the property of EPA, and not the contractor or cloud service provider (CSP). The contractor may also be the CSP. EPA retains ownership of the information and any media type that stores Government information.

(c) In the event the contractor is the CSP or can control the CSP through a subcontracting or other business relationship then the following requirements will apply:

(1) The CSP does not have rights to use the EPA information for any purposes other than those explicitly stated in the contract or applicable "Rights in Data" contract requirements.

(2) The CSP must protect EPA information from all unauthorized access.

(3) The CSP must allow EPA access to EPA information including data schemas, metadata, backups, and other associated data artifacts that are required to ensure EPA can fully and appropriately retrieve EPA information from the cloud environment that can be stored, read, and processed.

(4) The CSP must have been evaluated by a Third-Party Assessment Organization (3PAO) certified under the Federal Risk and Authorization Management Program (FedRAMP). The contractor must provide the most current, and any subsequent, Security Assessment Reports, system architecture diagram, system and technical descriptions, hardware and software listings, and other required Systems Security Plan sub-components to the Contracting Officer's Representative (COR) for consideration by the Information Security Officer (ISO) as part of the contractor's overall Systems Security Plan.

(5) The contractor must require the CSP to follow cloud computing contract best practices identified in "Creating Effective Cloud Computing Contracts for the Federal Government" produced by the Federal Chief Information Officer (CIO) Council and Federal Chief Acquisition Officers Council.

(d) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task T - Contract Performance Information and Testimony

(a) Dissemination of Contract Performance Information. The contractor must not publish, permit to be published, or distribute to the public, any information, oral or written, concerning the results or conclusions made pursuant to the performance of this contract, without the prior written consent of the Contracting Officer. A copy of any material proposed to be published or distributed must be submitted to the Contracting Officer for written approval prior to publication.

(b) Contractor Testimony. All requests for the testimony of the contractor or its employees, and any intention to testify as an expert witness relating to: (a) any work required by, and or performed under, this contract; or (b) any information provided by any party to assist the contractor in the performance of this contract, must be immediately reported to the Contracting Officer.

(c) *Subcontract flow down*. The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task U - Rehabilitation Act Section 508 Standards

(a) All electronic and information technology (EIT) procured through this contract must meet the applicable accessibility standards at 36 CFR 1194, unless a FAR 39.204 exception to this requirement exists. 36 CFR 1194 implements Section 508 of the Rehabilitation Act of 1973, as amended, and is viewable at http://www.access-board.gov/sec508/508standards.htm.

(b) The following standards are determined to be applicable to this contract:

(1) 1194.21. Software applications and operating systems
(2) 1194.22. Web-based intranet and Internet information and applications
(3) 1194.23 Telecommunications products
(4) 1194.24 Video and multimedia products
(5) 1194.25 Self-contained, closed products
(6) 1194.26 Desktop and portable computers
(7) 1194.31 Functional performance criteria
(8) 1194.41 Information, documentation, and support

(c) EPA is required by Section 508 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794d), to offer access to electronic and information technology for disabled individuals within its employment, and for disabled members of the public seeking information and services. This access must be comparable to that which is offered to similar individuals who do not have disabilities. Standards for complying with this law and any future updates are prescribed by the Architectural and Transportation Barriers Compliance Board ("The Access Board").

(d) Contractor deliverable(s) must comply with these standards.

(e) The final work product must include documentation that demonstrates or provides assurance that the deliverable conforms to the Section 508 Standards promulgated by the Access Board.

(f) In the event of a dispute between the contractor and EPA, EPA's assessment of the Section 508 compliance will prevail and the contractor will make any additional changes needed to conform with EPA's assessment, at no additional charge to EPA.

(g) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Task V - Termination for Default - Failure to Report Information Security Incident

(a) Definition. *Information Security Incident* is an occurrence that results in actual or potential jeopardy to the confidentiality, integrity, or availability of an information system or the information the system processes, stores

or transmits, or that constitutes a violation or imminent threat of violation of security policies, security procedures, or acceptable use policies.

(b) If the contractor was aware of an Information Security Incident and did not disclose it in accordance with the requirements specified in this contract or misrepresented relevant information to the Contracting Officer, the Government may terminate the contract for default, debar the contractor from Government contracting, or pursue other remedies as may be permitted by law or this contract.

(c) The contractor agrees to insert in each subcontract or consultant agreement placed hereunder, provisions which shall conform substantially to the language of this requirement, including this paragraph, unless otherwise authorized by the Contracting Officer.

Attachment 1 to the Performance Work Statement

Agency Access Badge Requirements for On-Site Contractor Personnel

To safeguard the EPA workforce and comply with Homeland Security Presidential Directive 12 (HSPD-12), Executive Order (E.O.) 13467, E.O. 13488 and Office of Personnel Management (OPM) regulations, the EPA requires the following:

- **For Unescorted Access for Six Months or Less**
  Contractor employees needing unescorted physical access to a controlled EPA facility[1] for six months or less must be determined by the EPA to be fit before being issued a physical access badge (picture ID). A fitness determination is, per E.O. 13488, a decision by an agency that an individual has or does not have the required level of character and conduct necessary to perform work for or on behalf of a federal agency as a contractor employee. A favorable fitness determination is not a decision to contract with an individual. Contractor employees must undergo, at a minimum, an FBI fingerprint check of law enforcement and investigative indices (see Section 2).

- **For Unescorted Access for More than Six Months**
  Contractor employees needing unescorted access to a controlled EPA facility for more than six months are required to have an HSPD-12 smart card, called an EPASS badge. Eligible contractor employees must have a completed or initiated background investigation at the National Agency Check and Inquiries (NACI) level or above, comply with all other investigative and HSPD-12-related requirements, and be determined by the EPA Personnel Security Branch (PSB) to be fit (see Section 3). "Initiated" means that all initial security requirements have been met (i.e., paperwork is completed, submitted, and PSB-approved; favorable fingerprint results have been received; funding has been provided to cover the cost of the investigation; and PSB has sent notification that the individual may begin work).

To ensure timely contract performance, the contractor must be prepared to immediately submit upon contract award the contractor employee information detailed in Section 1(c). This applies also to incumbent contractors' employees for follow-on acquisitions. All contractor employees under a new contract are subject to the requirements in Sections 2 or 3; however, the time needed to meet security requirements may be shorter for personnel who already have a favorable fitness determination.

Contractor employees may begin work on the contract start date provided all applicable documentation in Sections 1, 2, and 3 has been received by the EPA and there is no derogatory information to preclude a favorable determination. Timely submission of contractor employees' security forms and other required documentation is essential.

[1] A controlled facility is an area to which security controls have been applied to protect agency assets. Entry to the controlled area is restricted to personnel with a need for access.

A favorable determination may be revoked at any time should the EPA discover derogatory information upon which a contractor employee is unfit. Contractor employees deemed unfit will not be allowed to continue under the contract, and the contractor will be responsible for providing replacement employees acceptable to the EPA.

The EPA may make a determination of a contractor employee's fitness at any of the following points:

- When the EPA prescreens the individual's security forms. "Red flag" issues include:
  - Having been fired from a previous job or having left under unfavorable circumstances within the past five years (or longer, depending on the security form questions and type of investigation);
  - Failure to register with the Selective Service System (applies to male applicants born after December 31, 1959);
  - Within the past five years (or longer, depending on the security form questions and type of investigation), any arrest, charge, or conviction that has been upheld for violent or dangerous behavior or a pattern of arrests that demonstrates disregard for the law;
  - Illegal drug use within the previous year, or drug manufacture or other involvement for profit within the past five years (or longer, depending on the security form questions and type of investigation).
- When FBI fingerprint results are returned to the EPA;
- When OPM returns the individual's investigative results to the EPA;
- When the EPA becomes aware that the contractor employee may not be fit to perform work for or on behalf of a federal agency. The contractor is responsible for monitoring its employees' fitness to work and notifying the EPA immediately of any contractor employee arrests or illegal drug use.

1) Initial On-Site Contractor Requirements

This section contains the contractor's initial security requirements, which must be met before contractor employees can perform work **on-site** at EPA under this contract.

a) The contractor must identify a point of contact (POC) and alternate POC to facilitate security processes.

b) The contractor must ensure that all foreign nationals who will work under this contract have a valid U.S. Immigrant Visa or nonimmigrant Work Authorization Visa. The contractor must use e-Verify to verify employment eligibility as required by the FAR.

c) The EPA requires contractor employee information for the investigative and EPASS processes. Immediately upon contract award, or anytime new personnel are brought onboard, the contractor POC must log on to a secure, EPA-identified portal, create an account, and submit complete contractor employee information: Full name (as found on employment records and driver's license), Social Security Number, date of birth, place of birth (city, state, country), citizenship, employee email address, EPA program office or

regional office, and EPA work city and state. Note: Incomplete names, inaccurate names, and nicknames are unacceptable and may delay contractor employees' start date. Instructions and the portal link will be provided upon contract award.

d) EPA will provide the login information for the portal. After submission of the contractor employees' data, the Contracting Officer's Representative (COR) will notify the contractor POC if additional information or corrections are required. The COR's approval of the information triggers the investigative and EPASS processes.

2) Requirements for Contractor Employees Needing Unescorted Access for Six Months or Less

This section contains the requirements for contractor employees who are not eligible for an EPASS badge but who need unescorted physical access. The minimum security requirement is an FBI fingerprint check.

a) Before the contractor employee can begin work on-site at the EPA:
   i) He/she must be fingerprinted by the EPA; arrangements will be made by the COR.
   ii) The contractor employee must satisfactorily respond to all questions/information requests arising from the EPA's review of the fingerprint results.
   iii) The EPA must determine that the fingerprint results are favorable.

Once all requirements in Section 2(a) are met, the COR and contractor employee will be notified that the contractor employee can start work. Contractor employees will be issued a physical access badge and may work on-site at EPA. Contractor employees must sign a receipt acknowledging responsibility to safeguard the badge and surrender it when required (see Section 4(b)).

3) **Requirements for Contractor Employees Needing Unescorted Access for more than Six Months**

This section contains the requirements for contractor employees who are eligible for an EPASS badge and who must have, at a minimum, a NACI background investigation completed or initiated. Contractor employees needing access to sensitive information or otherwise occupying moderate- or high-risk positions must undergo an investigation above the NACI level. The EPA will assign a position risk level to each position on the contract and identify which contractor employees are EPASS-eligible.

a) EPASS-eligible contractor employees must undergo a background investigation appropriate to the risk level of the position occupied, as specified by the EPA; the minimum acceptable investigation is a NACI.

b) Employees who have previously undergone a federal background investigation at the required level, and who have worked for or on behalf of the federal government without a break in service since the investigation was completed, may not need a new investigation. The EPA will verify the investigative information and notify the contractor employee and

COR if a new investigation is required. If an investigation is not needed, the contractor employee must still be fingerprinted by the EPA for an FBI fingerprint check and have favorable fingerprint results returned before beginning work on-site at EPA.

c) Before beginning work on-site at the EPA, contractor employees who require a new background investigation must:
   i) Complete and submit the appropriate OPM security questionnaire specified by the EPA via OPM's e-QIP system. Access to e-QIP will be provided by the EPA; the questionnaires are viewable at www.opm.gov/forms. Foreign national contractor employees must, on the security questionnaire, provide their alien registration number or the number, type, and issuance location of the visa used for entry to the United States.
   ii) For a NACI only, also complete the OF 306, Declaration for Federal Employment, as required by OPM for any NACI and available at https://www.opm.gov/forms/pdf_fill/of0306.pdf. Contractor employees must answer questions 1-13 and 16, then sign the form on the "Applicant" line, 17a.
   iii) Follow all instructions on the form(s), answer all questions fully, and submit signature pages as directed by the EPA.
   iv) Be fingerprinted by the EPA; arrangements for fingerprinting will be made by the COR.
   v) Satisfactorily respond to all questions/information requests arising from the EPA's review of the forms or fingerprint results.
   vi) Receive favorable fingerprint results.

d) Once all requirements in Section 3(c) are met, the COR and contractor employee will be notified that the contractor employee can start work. Contractor employees may work on-site at EPA while OPM conducts the background investigation.

e) At a time and location specified by the EPA, contractor employees must report in person for EPASS identity (ID) proofing and show two unexpired forms of identification from the lists on Department of Homeland Security Form I-9. At least one of the documents must be a valid, unexpired state or federal government-issued photo ID; non-U.S. citizens must show at least one ID from Column A on Form I-9.

f) Before being issued an EPASS badge, contractor employees must sign a receipt acknowledging responsibility to safeguard the badge and surrender it when required (see Section 4(b)). Contractor employees must meet all EPASS badge life-cycle requirements.

g) A contractor employee has the right to appeal, in writing through the contractor POC to the COR, the denial or revocation of an EPASS badge. If the COR believes the appeal is justified, he/she will forward it to the Security Management Division (SMD). SMD's decision on behalf of the EPA will be final.

4) Ongoing Contractor Security Responsibilities

a) The contractor POC must immediately provide updated information via the secure portal when new contractor employees are added to the contract. These contractor employees must meet all initial investigative requirements before beginning work on-site at EPA. The contractor POC must also update information via the secure portal whenever a contractor employee leaves the contract.

b) The contractor POC must ensure that all EPA physical access and EPASS badges are returned to the COR as soon as any of the following occurs, unless otherwise determined by the Agency: (i) when the badge is no longer needed for contract performance; (ii) upon completion of a contractor employee's employment; or (iii) upon contract completion or termination.

c) These EPA security requirements must be incorporated into all resulting subcontracts wherein contractor personnel working under the subcontract require EPA physical access.